

**WALK-THROUGH NOTICE
and
REQUEST FOR BIDS**

Tepee Creek Phase 3 Meadow Restoration Project

Effective **August 6, 2018** the **YAKAMA NATION**, the **OWNER**, will be soliciting bids for construction associated with meadows restoration along Tepee Creek. The project is designed to reconnect the stream and floodplain. Work will involve production, transport and placement of two types of rock, topsoil, and common borrow fill, final grading, erosion control, and seeding.

NOTICE IS HEREBY GIVEN that sealed bid proposals will be received by the Yakima/Klickitat Fisheries Project, Attn: Deanna Lamebull, Room 112A, 4690 SR 22, P.O. Box 151, Toppenish, WA 98948, Phone: (509) 865-5121 ext. 6348 UNTIL:

11:00 A.M. Pacific Daylight Time on August 20, 2018

No proposals will be accepted after the above-stated time. Immediately following the above stated time, the proposals will be publicly opened and read.

A pre-bid walk-through will be conducted on **Monday, August 6, 2018 at 1 PM.**

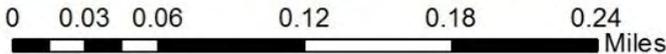
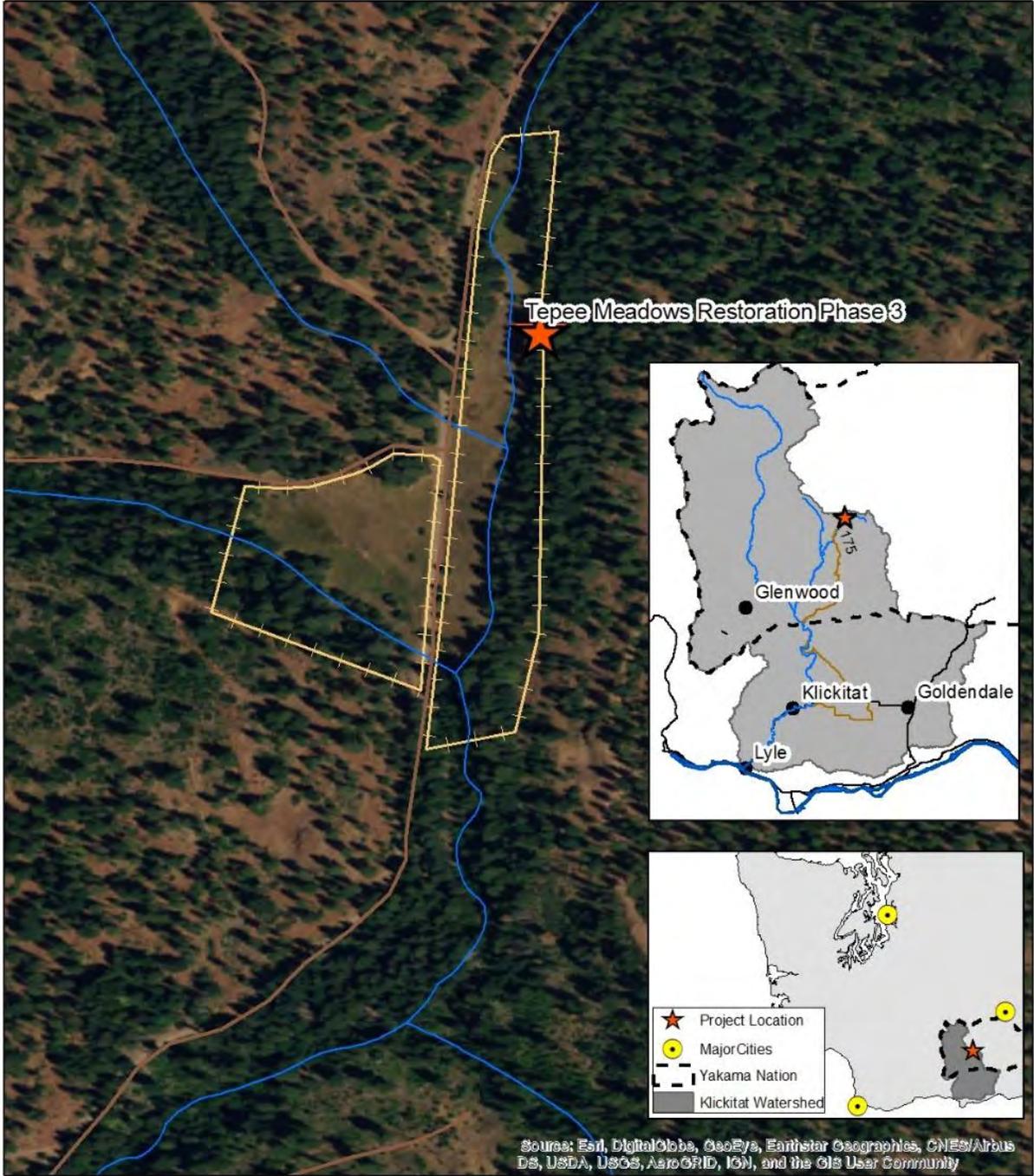
Interested parties can meet YNFP representatives at the intersection of the Signal Peak and Vessey Springs Roads (46.224722, -120.939941) or on-site (46.203250, -121.004240). Access to the walk-through location for individuals who are not enrolled members of the Yakama Nation must be secured in advance of August 6, 2018. If additional directions are needed contact David Lindley (509-369-3565 or dlindley@ykfp.org).

Bid documents will be distributed at the walk-through and available upon request.

Please note that the YN has enacted a Tribal Employment Rights Ordinance (TERO). TERO policies shall apply to this project, including Section 6 which may require the contractor to pay a one-time fee based on the total amount of the contract. This project is funded with federal monies, but does not include 93-638 funds.

For more information about these requirements contact:

TERO Director
Yakama Nation TERO Program
P.O. Box 151
Toppenish, WA 98948



Legend

-  Meadow Fence
-  Yakama Nation Roads
-  Streams



Tepee 3 Project Location.

Contractor's Bid Package

FOR

Tepee Creek Phase 3 Meadows Restoration Project

August 1, 2018

Prepared By:

**Yakama Nation Fisheries - Klickitat Field Office
P.O. Box 215
Klickitat, WA 98628
Phone: 509-369-3565
FAX: 509-830-0034
E-mail: dlindley@ykfp.org**

Critical Dates:

Pre-bid site walk-through (Strongly Encouraged)	August 6, 2018 – 1:00 pm
Question Submission Deadline:	August 13, 2018 – 5:00 pm
Bid Submission Deadline:	August 20, 2018 - 11:00 am
Public Opening:	August 20, 2018 – 11:15 am
Tentative Award Selection:	August 23, 2018 – 12:00 pm
Project Initiation (est):	September 17, 2018
Project Completion (est):	October 30, 2018

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ADVERTISEMENT FOR BIDS

**NOTICE IS HEREBY GIVEN that sealed bid proposals will be received by:
the Yakima/Klickitat Fisheries Project,
Attn: Deanna Lamebull, Yakama Nation Fish & Wildlife Building,
Yakima/Klickitat Fisheries Project
4690 SR22 (Room 112a) Toppenish, WA 98948
Phone: (509) 865-5121 ext. 6348**

UNTIL:

11:00 A.M. Pacific Daylight Time on August 20th, 2018

No proposals will be accepted after the above-stated time. Immediately following the above stated time, the proposals will be publicly opened and read.

I - GENERAL DESCRIPTION

The **YAKAMA NATION, OWNER**, is soliciting bids for construction of a habitat enhancement project in the Tepee Creek watershed. Tepee Creek Phase 3 Meadows Restoration Project lies within the Closed Area of the Yakama Reservation, approximately 22 miles east of Mount Adams. The project is located near the headwaters of Tepee Creek, a tributary to White Creek. White Creek flows into the Klickitat River at river mile 40. The project reach is approximately 1000 feet in length, flowing through a grassy, perennial meadow at the upstream end and a Ponderosa pine dominated forest at the downstream end where the valley narrows. Key activities will include modifying the existing highly incised channel to facilitate more frequent flooding of the surrounding meadow. Tepee Creek Phase 3 Meadows Restoration Project is the continuation of an ongoing effort to improve aquatic habitat conditions for ESA listed steelhead (*Oncorhynchus mykiss*) on a local and watershed scale by focusing on restoring incised, degraded, and disconnected sections of headwater meadow streams throughout the Tepee Creek watershed.

II - PROJECT BACKGROUND

Perennial flow is limited in Tepee Creek. The low/no flow period in late summer/early fall presents a population bottleneck for juvenile *O. mykiss* due to stranding and desiccation. Analysis of fisheries data suggests that juveniles rear in Tepee Creek for 1-3 years and significant seasonal movements are necessary to access perennially flowing habitats. Fish that exit White Creek as one year olds typically spend an additional year rearing in the mainstem Klickitat River before out-migrating to the Pacific Ocean.

Anecdotal accounts from the 1960s suggest that at least some of these reaches were historically perennial. Many of the same reaches showing signs of heavy sedimentation or bed armoring are also characterized by simplified channel morphology with low pool frequencies, rectangular, canal-like cross sections, and an absence of large woody debris (LWD) – all factors consistent

with degraded conditions. Impacts from grazing (in the form of altered riparian vegetation, bank erosion, and channel incision) are also evident in several meadow reaches within the watershed.

This meadows restoration project will be the third to address incised meadow reaches within Tepee Creek in an effort to increase groundwater storage in-order to augment late summer flows and extend flow duration.

Desired Future Conditions

In addition to providing seasonal inundation of the meadow and flood prone benches, bedform modifications are intended to maintain a higher water table throughout the year within the project area. An elevated water table will increase ecological function in the meadow year-round, provide wetland habitats and potentially extend surface flow in Tepee Creek later in the year. Mildly sloping banks will persist, once native grasses are established along the channel margins, banks, and meadow surfaces. The protected streambed and vegetated margins will prevent fine sediments from being washed downstream and decrease turbidity levels within lower Tepee and White Creeks, which are critical spawning and rearing habitat for Middle Columbia River steelhead.

III - CONTRACT OVERVIEW

To achieve desired future conditions, activities include using heavy equipment to raise the elevation of the stream channel bed by importing crushed rock and soil to reduce channel incision, channel slope, flow velocities, increase floodplain connectivity, groundwater storage, and improve wetland habitat. A new riparian fence will limit livestock access to the creek and future riparian plantings.

The contract will consist of two main components:

1. Raise the existing bed elevation of the Tepee Creek channel
2. Install a hardened section of channel in the transition zone between the raised channel bed and the lower untreated channel bed at the terminus of the downstream reach.

Additional information can be found in Appendix A – Maps and Appendix B – Work Description.

Awarding of the contract shall be based on a combination of price, equipment capability and condition, and **CONTRACTOR** experience and background. The **OWNER** shall have the **SOLE** discretion and responsibility for choosing the responsive and responsible **CONTRACTOR**.

1. Raise the existing bed elevation of the Tepee Creek channel
This item includes loading and hauling fill materials. Common Fill, Type 1 Rock, and Type 2 Rock and Topsoil shall be furnished by the Contractor. Potential borrow areas for common fill have been identified by the **OWNER** but will need to be confirmed by the **CONTRACTOR**. For all fill materials, the unit contract price per cubic yard shall include “Haul” and “installation”. This item includes detail grading to shape the channel as shown in the Plans.

No work shall occur outside of the limits of disturbance shown in the Plans unless authorized by the Owner.

Apply Common Borrow and Topsoil in 8" lifts and compact as specified in design drawings. Compacting shall be by bucket compaction to a visibly compacted state.

2. Provide an armored section of channel to transition the raised channel bed to the lower untreated channel bed condition at downstream reach terminus. Rock shall be loaded, hauled and placed from source areas provided by the **CONTRACTOR**.

Apply Type 1 and Type 2 Rock in 6-9" lifts and compact. Compacting shall be by bucket compaction to a visibly compacted state.

IV - CONTRACTORS' RESPONSIBILITIES

The **CONTRACTOR** shall be responsible for performing their work in a timely, professional manner, shall abide by all applicable tribal, state, and federal guidelines that govern this project, and shall implement all required permit conditions. See Appendix F.

The **CONTRACTOR** is **solely responsible** for maintaining safe working conditions near his/her equipment and for the safe operation of his/her equipment. If at any time the **CONTRACTOR** or his/her operators determine that instructions given by the **OWNER** would create a potentially unsafe working condition or would jeopardize the equipment, the **OWNER** shall be **immediately** notified of the problem. The **OWNER** will then work with the **CONTRACTOR** to find an acceptable alternative method to complete the required task.

The **CONTRACTOR** shall assume full financial and legal responsibility for any damage caused by their machinery and/or crews including but not limited to the following:

- 1- Any equipment becoming stuck due to unstable ground or operator error.
- 2- Any equipment that is damaged due to unstable ground or operator error.
- 3- Any environmental damage due to hydraulic, lubricant or coolant leaks.
- 4- Any damage outside the project area to culverts, bridges, paved roads or other property caused during operations.

Payment

Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified. Payment will be made in accordance with Section XII.

Measurement

“Construction Incl. Haul” shall be measured by cubic yard for Topsoil, Common Borrow, Type 1 Rock, and Type 2 Rock. All material will be measured in the position it occupies after placement and compaction. An original ground measurement was taken using digital terrain modeling survey techniques. The original ground will be compared with the planned finished

section shown in the Plans. Slope/ground intercept points defining the limits of the measurement will be as staked by the **OWNER**. No additional compensation will be made for material that is stockpiled and moved again.

V - CONSTRUCTION OVERSIGHT

The **OWNER or OWNER'S DESIGNEE** shall be available during construction and shall provide the **CONTRACTOR** with information as required to carry out the **CONTRACT**.

Except as noted in SECTION VI - ACCESS, the **OWNER** shall have full authority to direct **ALL** work. The **OWNER** must preapprove any deviation from specifications or instructions.

IV - MINIMUM EQUIPMENT & PERSONNEL REQUIREMENTS

The **CONTRACTOR** shall propose the major pieces of equipment that are required to complete the work specified. Work could be accomplished via some combination of track mounted excavator, front end loader, dump truck, and/or skid steer. The **CONTRACTOR** is responsible for assessing all other equipment needs and supplying such equipment.

The **CONTRACTOR** is responsible for providing experienced operators and all fuel and lubricants.

VI - SPECIFICATIONS

See EXHIBIT B.

Industrial Fire Precaution Level (IFPL)

Work shall be conducted in accordance with the current IFPL level. The IFPL of this project is Zone 680. Current IFPL level shall be determined by calling 1-800-527-3305 and/or visiting the following website: <https://www.dnr.wa.gov/ifpl>

VII - ACCESS

Prior to initiating work the **CONTRACTOR** and the **OWNER** shall review all access routes. Once the **CONTRACTOR** approves the sites, he/she shall thereafter be **SOLELY** responsible for material delivery, access route preparation and restoration of the access routes. See Section IV – **CONTRACTORS' RESPONSIBILITY** for further requirements.

VIII - CONSTRUCTION SCHEDULE

The work can be initiated as soon as a contract is in place. It is anticipated that work will begin no later than September 17, 2018 and be completed by October 30, 2018.

Time of Completion – Responsibility of Contractor

The project has been timed to occur when the stream is dry, due to fall freshets which occur in late October and will re-wet the channel and inclement weather that becomes more common in late-October and early-November time is of the essence to successfully complete this project. Snow is anticipated to hinder work starting in late-November and preventing access to the site by mid-December. Therefore completion of the project needs to occur prior to November.

The **CONTRACTOR** has two weeks from the date when the notice to proceed is received to begin collection and stockpiling of materials.

1) Production, Delivery, and Stockpiling of Materials:

Activities shall consist of:

Mineral Materials: There are three types of mineral material to be produced and transported to the site

- Type I Rock – **CONTRACTOR** shall provide a durable and sound rock gradation (quantity and gradation specified in Exhibit B) to be used for riffle construction. Source location shall be determined by **CONTRACTOR**. Material may be a crushed product. Subsequent to production, material shall be stockpiled and approved by OWNER prior to hauling. OWNER may choose to have a sieve analysis performed to confirm gradation. Material shall be stockpiled at designated location near downstream end of project (Exhibit B). Stockpile shall be managed to ensure a uniform distribution of material and avoid veins of excessively coarse or fine material.
- Type II Rock – **CONTRACTOR** shall provide a durable and sound rock gradation (quantity and gradation specified in Exhibit B) to be used for riffle construction. Source location shall be determined by **CONTRACTOR**. Material may be a crushed product. Subsequent to production, material shall be stockpiled and approved by OWNER prior to hauling. OWNER may choose to have a sieve analysis performed to confirm gradation. Material shall be stockpiled at designated locations (Exhibit B). Stockpile shall be managed to ensure a uniform distribution of material and avoid veins of excessively coarse or fine material.
- Fill – **CONTRACTOR** shall produce common fill from either possible areas identified by the **OWNER** (Appendix A) or **CONTRACTOR** provided sources, to be used for:
 - Soil Fill – To fill-in bottom of channel invert and act as subgrade for constructed riffles.
- Topsoil – Type C, meeting the requirements of 8-02.3(4)B and 9.14.1(3). Exhibit B. Source location shall be determined by **CONTRACTOR**.

IX - INSURANCE

EACH CONTRACTOR shall maintain insurance coverage at their cost from insurers acceptable the **OWNER** and shall furnish certificates of insurance or self-insurance approved by the **OWNER**, giving evidence of such coverage to the **OWNER**, which satisfies the requirements as set forth in **APPENDIX D**.

X - BID SCHEDULE & SELECTION

SELECTION PROCESS

Award of these contracts is based in part on the **CONTRACTOR'S** experience, background and ability to successfully complete this project. Each **BIDDER** shall provide references and/or other information related to their **PROPOSED BID** that demonstrates their past performance record harvesting and transporting trees and performing routine road clearing/preparation. Additionally, because the Yakama Nation is financing these projects, the work shall be governed by **INDIAN PREFERENCE** requirements defined in **APPENDIX E – ADDITIONAL CONDITIONS**. The **OWNER** shall evaluate qualifications of bidders.

Contract award shall be made to the qualified bidder (See conditions above) based on the lowest **responsive** and responsible bid for the **BID SCHEDULE**.

BIDDERS should plan to attend an YKFP hosted walk-through on 8/06/2018. Please call or email David Lindley (509-830-0034, dlindley@ykfp.org) to confirm location if you have any questions about attendance of the walk-through. Perspective attendees who are not enrolled members of the Yakama Nation need to obtain a Closed Area Courtesy Permit in advance of the walk-through.

Bids shall be considered **NON-RESPONSIVE** if they fail to provide satisfactory completeness of information requested in the Bid Schedule (Section XIII).

- I. Qualified Contractor Bids on the Bid Schedule shall be received in hand no later than 11:00 A.M. Pacific Daylight Time on August 20, 2018. Bids may be mailed to:

Yakama Nation Fish and Wildlife
Yakima/Klickitat Fisheries Project
Attn: Deanna Lamebull
4690 SR 22 (Room 112A)
P.O. Box 151
Toppenish, WA 98948
Phone: (509)865-5121 ext. 6348

OR

If the bid is delivered by hand, it shall be given to Deanna Lamebull at the above address.

The Bid shall be contained in a SEALED envelope containing the **CONTRACTOR'S NAME & ADDRESS** and following words on the outside of the envelope:

Tepee Creek Phase 3 Meadows Restoration Project

II. Public Bid Openings shall begin at 11:15 A.M. Pacific Daylight Time on August 20th, 2018 at:

Yakama Nation Fish and Wildlife
4690 SR 22 (Fish and Wildlife Conference Room)
Toppenish, WA 98948
Phone: (509)865-5121 ext. 6348

I. Bid awards for the Bid Schedule shall be made no later than 12:00 P.M. Pacific Daylight Time on August 23th, 2018.

PROSPECTIVE CONTRACTOR INQUIRIES

Prospective Contractors may request clarification concerning information contained in this **CONTRACTORS BID PACKAGE** by submitting a written statement or question to the **OWNER** via E-mail (dlindley@ykfp.org) **no later than 5:00 P.M. Pacific Daylight Time, August 13th, 2018.** The statement/question shall be answered in writing by the **OWNER no later than 1:00 P.M. Pacific Daylight Time, August 14th, 2018.** The **OWNER'S** response shall become an **ADDENDA** to this **BID PACKAGE** and also shall be sent by **E-mail or FAX** to all contractors of record that have requested a copy of this **CONTRACTOR'S BID PACKAGE.**

(Note: Prospective Contractors must provide their E-mail addresses to receive subsequent responses. Failure to receive any such ADDENDA(S) shall not relieve such Bidder of fulfilling the modifications contained therein). The Bidder shall be responsible to ascertain prior to submittal of a Bid Proposal that all addenda issued have been received, and are acknowledged on the Bid Schedule(s).

XI - ADDITIONAL CONDITIONS

In addition to all of the requirements stated herein, and the conditions contained in appendices, **EACH PROPOSED BID** shall also be governed by the additional conditions listed in **APPENDIX E.**

Protection of wells – There are 3 shallow groundwater wells within the limits of disturbance. These wells are part of a long-term monitoring program to gage project effectiveness. CONTRACTOR shall not damage or otherwise disturb these wells. **Each well damaged shall result in a \$1000 fine. Any fines shall be deducted from payments owed by the OWNER to the CONTRACTOR.**

XII - PAYMENT

Individual construction elements shall be paid on a **LUMP SUM** basis according to completion. Completed elements will be noted by the **CONTRACTOR** and submitted to the **OWNER** for verification. Bills may be submitted for payment once the **OWNER** has verified completion. Invoice for work completed in September 2018 shall be submitted to the **OWNER** no later than **10/15/2018** to facilitate YN fiscal year reporting.

Ten percent (10%) of the amount billed shall be retained until a **FINAL RELEASE** has been signed by the **CONTRACTOR** and delivered to the **OWNER** and all reclamation/restoration has been completed as outlined above.

XIII - BID SCHEDULE

REFERENCES – list references of individuals with whom you’ve contracted to perform comparable work in the past

1) Name: _____
Organization: _____
Phone Number: _____
Nature of work: _____

2) Name: _____
Organization: _____
Phone Number: _____
Nature of work: _____

MACHINERY – list proposed machinery and equipment to be used:

Machine #1

List the make & model _____

Machine #2

List the make & model _____

Machine #3

List the make & model _____

Machine #4

List the make & model _____

Machine #5

List the make & model _____

PROPOSAL - briefly describe project approach:

Element	Activity	Unit	Total
Temporary Erosion Sediment Control (TESC)	Perform stormwater detention and water quality assurance measures as needed	Lump sum	
Mobilization	All costs to move workers and machines to the intital site and subsequent moves to adjacent sites within the project	Lump sum	
Stripping	As specified by OWNER, strip existing vegetation to salvage native vegetation or remove pockets of intense weed investation	Lump sum	
Type 1 Rock	Source and install according to design specifications,	280 CY	
Type 2 Rock	Source and install according to design specifications	300 CY	
Topsoil	Source and install according to design specifications	40 CY	
Common Borrow	Source and install according to design specifications	1200 CY	
Grand Total			

All prices bid herein shall remain in effect through 11/30/2018.

CONTRACTOR shall be required to comply with the requirements as stated in the attached **CONTRACTOR'S BID PACKAGE**.

CONTRACTOR: _____

ADDRESS: _____

LICENSE NUMBER: _____

BY: _____

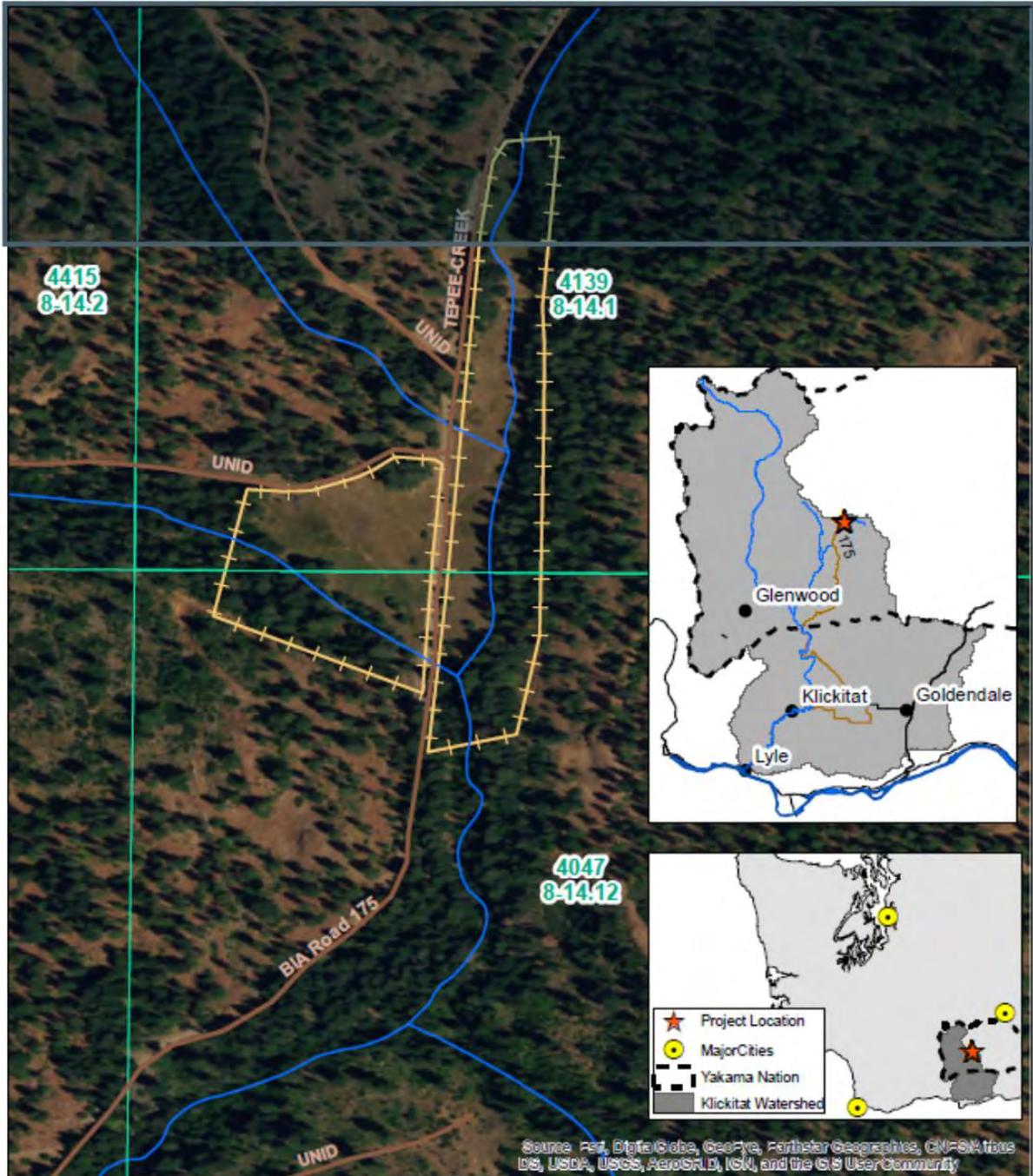
(Signature and Title)

DATE: _____

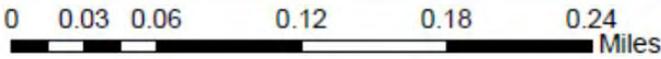
Phone No. _____ FAX No. _____ E-mail _____

APPENDIX A

MAP/PHOTO



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNR/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Legend

-  Meadow Fence and approx area of disturbance
-  Yakama Nation Roads
-  Project Area Allotment Number and TwnSec





Figure 1. Tepee Creek Phase 3 Meadows Restoration looking downstream.



Figure 2. Tepee Creek Phase 3 Meadows Restoration looking upstream.



Figure 3. Project location and two potential borrow pits for common fill in close proximity.

APPENDIX B

WORK DESCRIPTION

POLLUTION PREVENTION: TESC and SPCC PLANS and IMPLEMENTATION

Description

This work shall provide for preparation, implementation, and removal of a Temporary Erosion Sediment Control (TESC) plan and for the preparation and implementation of a Spill Prevention Control and Countermeasure (SPCC) plan in accordance with specifications in Exhibit B, page 3.

1. The Contractor shall submit a TESC for the project to the Owner for approval. The TESC must satisfy the requirements of the Washington Department of Ecology NPDES Stormwater General Permit for Construction Activity and all other applicable permits. The TESC included in the Drawings and described herein is intended to provide a baseline for sediment and erosion control and does not ensure that the standards established by any applicable permits will be met. The Contractor may use these measures or alternative measures of his own design to ensure satisfactory performance and that the erosion control requirements of all applicable permits are met. The contractor shall be named as the permit holder. The contractor shall be responsible for implementing, inspecting and filing reports, maintaining, replacing, and removing TESC and SPCC measures. The plan shall include the name, address and 24-hour contact number of the person responsible for erosion prevention and sediment control measures.
2. A spill Containment Kit shall be on site and crews shall be trained in its use. Measurement "TESC, SPCC Plan and Implementation," including the above amendments to the item will be measured by lump sum.

Payment

Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals

MOBILIZATION

This item shall consist of preparation work and operations performed by the Contractor in accordance with the provisions of Section 1-09.7 of the Washington Department of Transportation Standard Specifications (Standard Specifications) and amended as described below.

The **OWNER** will designate temporary access routes and stockpile areas prior to construction. Temporary site access routes shall be adhered to so that impacts to the site are minimized.

Measurement and Payment

Payment for Mobilization shall be by the lump sum contract price for, 'Mobilization', partial payments will be made as in accordance with Section 1-09.9 of the f the Washington Department of Transportation Standard Specifications. Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified.

STRIPPING

Stripping consist of the removal of the top 6" of surface soil in areas designated by the Owner. Stripped soil may be used as Common Fill provided it does not comprise more than 10% of the fill.

Measurement: Excavation, haul, and stockpiling materials shall be included in this item.

Payment: Payment for "Stripping" will be made per acre.

CHANNEL FILL CONSTRUCTION

Description

This item loading, hauling, placing fill, and embankment compacting channel fill material in accordance with Section 2-03 of the Standard Specifications, and as amended by these Special Provisions.

1. This item includes loading and hauling fill materials. Common Fill, Type 1 Rock, Type 2 Rock and Topsoil shall be loaded and hauled from borrow areas provided by the Owner. Type 1 Rock, Type 2 Rock and Topsoil shall be furnished by the Contractor. For all fill materials, the unit contract price per cubic yard shall include "Haul".
2. This item includes detail grading to shape the channel as shown in the Plans.
5. No work shall occur outside of the limits of disturbance shown in the Plans unless authorized by the Owner.
6. Apply Common Borrow and Topsoil in 8" lifts and compact. Apply Type 1 and Type 2 Rock in 6-9" lifts and compact. Compacting shall be by bucket compaction to a visibly compacted state.

Materials

Materials shall meet the requirements of Common Borrow and Topsoil (Earth Embankment), and Type 1 and Type 2 Rock (Rock Embankment) with size gradation as follows:

COMMON BORROW WILL BE GRANULAR OR NONGRANULAR SOIL COLLECTED FROM ONE OR MORE SOURCES PROVIDED BY THE OWNER

TOPSOIL SHALL BE "TOPSOIL TYPE C", MEETING THE REQUIREMENTS OF 8-02.3(4)B AND 9.14.1(3).

TYPE 1 ROCK - GRADATION		TYPE 2 ROCK - GRADATION	
Screen	Percent Passing	Screen	Percent Passing
7"	100	12"	100
6"	85	10"	85
5"	50	8"	50
4"	30	6"	30
1/2"	15	3/4"	15
#200	5	#200	5

Measurement

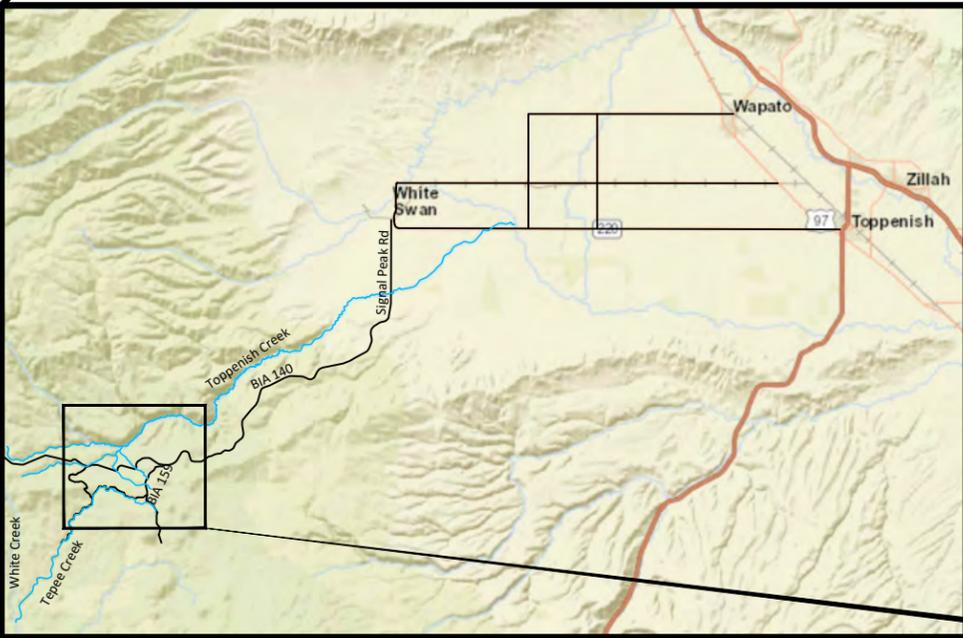
Channel Fill Construction Including Haul shall be measured by cubic yard for Topsoil, Common Borrow, Type 1 Rock, and Type 2 Rock. All material will be measured in the position it occupies after placement and compaction. An original ground measurement was taken using digital terrain modeling survey techniques. The original ground will be compared with the planned finished section shown in the Plans. Slope/ground intercept points defining the limits of the measurement will be as staked by the Owner. No additional compensation will be made for excavated material that is stockpiled and moved again.

Payment

Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified. Payment will be made in accordance with Section 1-04.1 for the following bid items: "Embankment Construction Incl. Haul" per cubic yard.

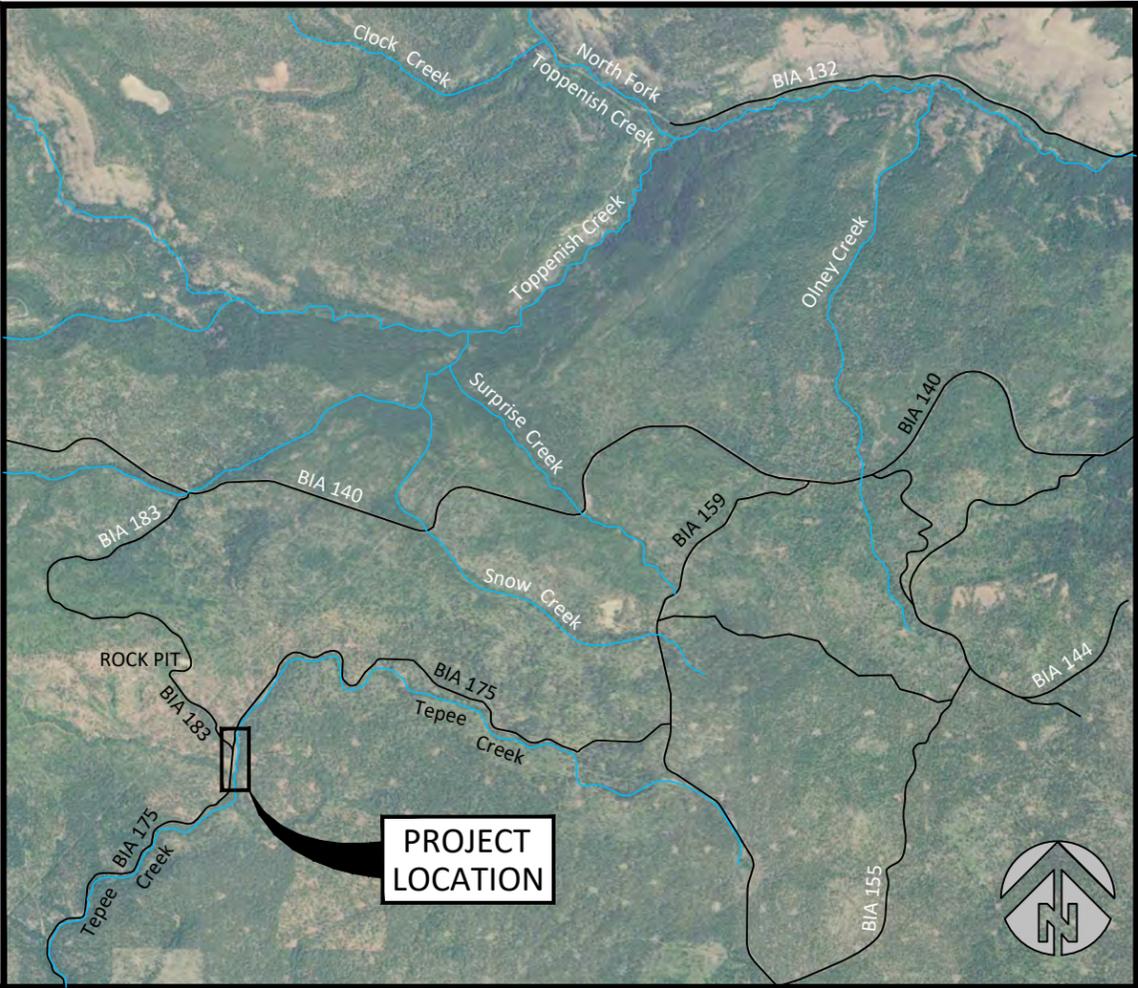
TEPEE CREEK PHASE 3 STREAM ENHANCEMENT PROJECT

Final Design



VICINITY MAP
SCALE: 1" = 8mi.

COORDINATES:
 LATITUDE 46°12'05.90" N
 LONGITUDE 121°00'14.86" W
 SECTIONS 1 & 12, TOWNSHIP 8N, RANGE 14E
 WATERBODY: TEPEE CREEK
 TRIBUTARY OF: WHITE CREEK



SITE MAP
SCALE: 1" = 1mi.

Sheet Index	
Sheet Number	Sheet Title
1	Cover, Sheet List and Location
2	General Notes
3	HIP III General Conservation Measures (1 of 2)
4	HIP III General Conservation Measures (2 of 2)
5	Aerial View of Site
6	Channel Plan and Profile
7	Section Views
8	Tributary Plan, Profile, and Section
9	Specifications



NO.	BY	DATE	REVISION DESCRIPTION

MM DRAWN	MM DESIGNED	MM, LH CHECKED
MM APPROVED	6/4/18 DATE	PROJECT

CONFEDERATED TRIBES AND BANDS OF THE YAKAMA NATION
 TEPEE CREEK STREAM ENHANCEMENT PROJECT
 WHITE SWAN, WA



501 Portway Avenue, Suite 101
 Hood River, OR 97031
 541.386.9003
 www.interfluve.com

COVER, SHEET LIST AND
 LOCATION

SHEET
 1 OF 9

IT IS STRONGLY SUGGESTED THAT THE CONTRACTOR ATTEND A PRE-BID SITE MEETING.

THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING WITH THE OWNER AND OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION.

ALL WORK SHALL CONFORM TO THE 2014 EDITIONS OF STANDARD PLANS AND SPECIFICATIONS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT), AND LOCAL STANDARDS UNLESS INDICATED OTHERWISE BY THE CONTRACT DOCUMENTS. IN CASE OF A CONFLICT BETWEEN THE REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT WILL PREVAIL.

BPA HIP III

THIS PROJECT WAS DESIGNED IN ACCORDANCE WITH THE BPA HABITAT IMPROVEMENT PROGRAM, PROGRAMMATIC BIOLOGICAL OPINION (HIP III). HIP III GENERAL CONSERVATION MEASURES (CMs) ARE INCLUDED ON SHEETS 3 AND 3. SITE SPECIFIC DIRECTION IS INCLUDED IN THE FOLLOWING GENERAL NOTES. ANY VARIANCES FROM HIP III CMs WILL BE REQUESTED BY OWNER. IN CASE OF A CONFLICT BETWEEN THE REGULATORY STANDARDS OR SPECIFICATIONS, LOCAL REGULATIONS, OR OTHER CONTRACT DOCUMENTATION, THE MORE STRINGENT WILL PREVAIL, UNLESS SPECIFIED IN WRITING BY THE OWNER.

EXISTING DATA

TOPOGRAPHIC SURVEY COLLECTED BY INTER-FLUVE, INC. BY RTK GPS AND TOTAL STATION IN 2013. REFERENCED TO NAD83 WASHINGTON STATE PLANE, NORTH ZONE US FEET NAVD 88.

CULTURAL RESOURCES

IF YOUR WORK BRINGS YOU INTO CONTACT WITH ANY OF THE FOLLOWING CULTURAL RESOURCES:

- NATIVE AMERICAN CULTURAL ARTIFACTS (EXAMPLE: FLAKES, ARROWHEADS, STONE TOOLS, BONE TOOLS, POTTERY, ETC.)
- HISTORIC ERA ARTIFACTS (EXAMPLE: BUILDING FOUNDATIONS, HOMESTEADS, SHIPWRECKS, MINING CAMPS, ETC.)
- HUMAN SKELETAL REMAINS AND BONE FRAGMENTS

YOU MUST IMMEDIATELY DISCONTINUE ALL GROUND-DISTURBING ACTIVITY. DO NOT TOUCH OR MOVE THE OBJECTS AND MAINTAIN THE CONFIDENTIALITY OF THE SITE. FOLLOW THE PROCEDURES LISTED IN THE BPA INADVERTENT DISCOVERY PROCEDURE AND AWAIT FURTHER DIRECTION FROM BPA'S CULTURAL RESOURCES STAFF.

INVASIVE SPECIES CONTROL

THE FOLLOWING MEASURES WILL BE FOLLOWED TO AVOID INTRODUCTION OF INVASIVE PLANTS AND NOXIOUS WEEDS INTO PROJECT AREAS:

PRIOR TO ENTERING THE SITE, ALL VEHICLES AND EQUIPMENT SHALL BE POWER WASHED, ALLOWED TO FULLY DRY, AND INSPECTED TO MAKE SURE NO PLANTS, SOIL, OR OTHER ORGANIC MATERIAL ADHERES TO THE SURFACE.

LIVE TREES

ALL TREES NOT MARKED FOR REMOVAL SHALL BE PRESERVED AND UNDISTURBED. CONSTRUCTION ACTIVITY SHALL NOT DEBARK OR DAMAGE LIVE TREES.

KEEP OUT OF DRIP LINE OF ALL PRESERVED EXISTING TREES.

ALL SAPLING AND TREES TO BE REMOVED FOR ACCESS WILL BE APPROVED AND CLEARLY MARKED BY THE OWNER'S REPRESENTATIVE.

ALL TREES REMOVED WITHIN CLEARING LIMITS SHALL BE REMOVED WHOLE WITH ROOTS INTACT AND UTILIZED IN THE CHANNEL CONSTRUCTION AS DIRECTED BY OWNER'S REPRESENTATIVE.

ABBREVIATIONS

APPROX	APPROXIMATE	INV	INVERT
CY	CUBIC YARDS	LWM	LARGE WOODY MATERIAL
°	DEGREES	MAX	MAXIMUM
DIA or Ø	DIAMETER	MIN	MINIMUM
DBH	DIAMETER AT BREAST HEIGHT	OHW	ORDINARY HIGH WATER
EA	EACH	%	PERCENT
EL or ELEV	ELEVATION	RMx	RIVER MILE x
ESC	EROSION AND SEDIMENT CONTROL	STA	STATION
EXIST	EXISTING	TBD	TO BE DETERMINED
FT or '	FEET	TYP	TYPICAL
FTR	FULLY THREADED ROD	VERT	VERTICAL
HORIZ	HORIZONTAL	WSE	WATER SURFACE ELEVATION
IN or "	INCH	YR	YEAR



NO.	BY	DATE	REVISION DESCRIPTION

MM	MM	MM,LH
DRAWN	DESIGNED	CHECKED
MM	6/4/18	
APPROVED	DATE	PROJECT

CONFEDERATED TRIBES AND BANDS OF THE YAKAMA NATION
 TEPEE CREEK STREAM ENHANCEMENT PROJECT
 WHITE SWAN, WA



501 Portway Avenue, Suite 101
 Hood River, OR 97031
 541.386.9003
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GENERAL NOTES

HIP 3 GENERAL AQUATIC CONSERVATION MEASURES APPLICABLE TO ALL ACTIONS

THE ACTIVITIES COVERED UNDER THE HIP III ARE INTENDED TO PROTECT AND RESTORE FISH AND WILDLIFE HABITAT WITH LONG-TERM BENEFITS TO ESA-LISTED SPECIES. TO MINIMIZE THESE SHORT-TERM ADVERSE EFFECTS AND MAKE THEM PREDICTABLE FOR THE PURPOSES OF PROGRAMMATIC ANALYSIS, BPA WILL INCLUDE IN ALL PROJECTS IMPLEMENTED UNDER THIS HIP III PROPOSED ACTION THE FOLLOWING GENERAL CONSERVATION MEASURES (DEVELOPED IN COORDINATION WITH USFWS AND NMFS).

PROJECT DESIGN AND SITE PREPARATION.

1) STATE AND FEDERAL PERMITS. ALL APPLICABLE REGULATORY PERMITS AND OFFICIAL PROJECT AUTHORIZATIONS WILL BE OBTAINED BEFORE PROJECT IMPLEMENTATION. THESE PERMITS AND AUTHORIZATIONS INCLUDE, BUT ARE NOT LIMITED TO, NATIONAL ENVIRONMENTAL POLICY ACT, NATIONAL HISTORIC PRESERVATION ACT, AND THE APPROPRIATE STATE AGENCY REMOVAL AND FILL PERMIT, USACE CLEAN WATER ACT (CWA) 404 PERMITS, AND CWA SECTION 401 WATER QUALITY CERTIFICATIONS.

2) TIMING OF IN-WATER WORK. APPROPRIATE STATE (OREGON DEPARTMENT OF FISH AND WILDLIFE (ODFW), WASHINGTON DEPARTMENT OF FISH AND WILDLIFE (WDFW), IDAHO DEPARTMENT OF FISH AND GAME (IDFG), AND MONTANA FISH WILDLIFE AND PARKS (MFWP)) GUIDELINES FOR TIMING OF IN-WATER WORK WINDOWS (IWW) WILL BE FOLLOWED.

A) BULL TROUT - WHILE UTILIZING THE APPROPRIATE STATE DESIGNATED IN-WATER WORK PERIOD WILL LESSEN THE RISK TO BULL TROUT, THIS ALONE MAY NOT BE SUFFICIENT TO ADEQUATELY PROTECT LOCAL BULL TROUT POPULATIONS. THIS IS ESPECIALLY TRUE IF WORK IS OCCURRING IN SPAWNING AND REARING AREAS BECAUSE EGGS, ALEVIN, AND FRY ARE IN THE SUBSTRATE OR CLOSELY ASSOCIATED HABITATS NEARLY YEAR ROUND. SOME AREAS MAY NOT HAVE DESIGNATED IN-WATER WORK WINDOWS FOR BULL TROUT OR IF THEY DO, THEY MAY CONFLICT WITH WORK WINDOWS FOR SALMON AND STEELHEAD. IF THIS IS THE CASE, OR IF PROPOSED WORK IS TO OCCUR WITHIN BULL TROUT SPAWNING AND REARING HABITATS, PROJECT PROponents WILL CONTACT THE APPROPRIATE USFWS FIELD OFFICE TO INSURE THAT ALL REASONABLE IMPLEMENTATION MEASURES ARE CONSIDERED AND AN APPROPRIATE IN-WATER WORK WINDOW IS BEING USED TO MINIMIZE PROJECT EFFECTS.

B) LAMPREY - THE PROJECT SPONSOR AND/OR THEIR CONTRACTORS WILL AVOID WORKING IN STREAM OR RIVER CHANNELS THAT CONTAIN PACIFIC LAMPREY FROM MARCH 1 TO JULY 1 IN LOW TO MID ELEVATION REACHES (<5,000 FEET). IN HIGH ELEVATION REACHES (>5,000 FEET), THE PROJECT SPONSOR WILL AVOID WORKING IN STREAM OR RIVER CHANNELS FROM MARCH 1 TO AUGUST 1. IF EITHER TIMEFRAME IS INCOMPATIBLE WITH OTHER OBJECTIVES, THE AREA WILL BE SURVEYED FOR NESTS AND LAMPREY PRESENCE, AND AVOIDED IF POSSIBLE. IF LAMPREYS ARE KNOWN TO EXIST, THE PROJECT SPONSOR WILL UTILIZE DEWATERING AND SALVAGE PROCEDURES OUTLINED IN US FISH AND WILDLIFE SERVICE BEST MANAGEMENT PRACTICES TO MINIMIZE ADVERSE EFFECTS TO PACIFIC LAMPREY (2010).

C) EXCEPTIONS TO ODFW, WDFW, MFWP, OR IDFG IN-WATER WORK WINDOWS WILL BE REQUESTED THROUGH THE VARIANCE PROCESS (PAGE 2).

3) CONTAMINANTS. THE PROJECT SPONSOR WILL COMPLETE A SITE ASSESSMENT WITH THE FOLLOWING ELEMENTS TO IDENTIFY THE TYPE, QUANTITY, AND EXTENT OF ANY POTENTIAL CONTAMINATION FOR ANY ACTION THAT INVOLVES EXCAVATION OF MORE THAN 20 CUBIC YARDS OF MATERIAL:

- A) A REVIEW OF AVAILABLE RECORDS, SUCH AS FORMER SITE USE, BUILDING PLANS, AND RECORDS OF ANY PRIOR CONTAMINATION EVENTS;
- B) A SITE VISIT TO INSPECT THE AREAS USED FOR VARIOUS INDUSTRIAL PROCESSES AND THE CONDITION OF THE PROPERTY;
- C) INTERVIEWS WITH KNOWLEDGEABLE PEOPLE, SUCH AS SITE OWNERS, OPERATORS, AND OCCUPANTS, NEIGHBORS, OR LOCAL GOVERNMENT OFFICIALS; AND
- D) A SUMMARY, STORED WITH THE PROJECT FILE THAT INCLUDES AN ASSESSMENT OF THE LIKELIHOOD THAT CONTAMINANTS ARE PRESENT AT THE SITE, BASED ON ITEMS 4(A) THROUGH 4(C).

4) SITE LAYOUT AND FLAGGING. PRIOR TO CONSTRUCTION, THE ACTION AREA WILL BE CLEARLY FLAGGED TO IDENTIFY THE FOLLOWING:

- A) SENSITIVE RESOURCE AREAS, SUCH AS AREAS BELOW ORDINARY HIGH WATER, SPAWNING AREAS, SPRINGS, AND WETLANDS;
- B) EQUIPMENT ENTRY AND EXIT POINTS;
- C) ROAD AND STREAM CROSSING ALIGNMENTS;
- D) STAGING, STORAGE, AND STOCKPILE AREAS; AND
- E) NO-SPRAY AREAS AND BUFFERS.

5) TEMPORARY ACCESS ROADS AND PATHS.

- A) EXISTING ACCESS ROADS AND PATHS WILL BE PREFERENTIALLY USED WHENEVER REASONABLE, AND THE NUMBER AND LENGTH OF TEMPORARY ACCESS ROADS AND PATHS THROUGH RIPARIAN AREAS AND FLOODPLAINS WILL BE MINIMIZED TO LESSEN SOIL DISTURBANCE AND COMPACTION, AND IMPACTS TO VEGETATION.
- B) TEMPORARY ACCESS ROADS AND PATHS WILL NOT BE BUILT ON SLOPES WHERE GRADE, SOIL, OR OTHER FEATURES SUGGEST A LIKELIHOOD OF EXCESSIVE EROSION OR FAILURE. IF SLOPES ARE STEEPER THAN 30%, THEN THE ROAD WILL BE DESIGNED BY A CIVIL ENGINEER WITH EXPERIENCE IN STEEP ROAD DESIGN.

C) THE REMOVAL OF RIPARIAN VEGETATION DURING CONSTRUCTION OF TEMPORARY ACCESS ROADS WILL BE MINIMIZED. WHEN TEMPORARY VEGETATION REMOVAL IS REQUIRED, VEGETATION WILL BE CUT AT GROUND LEVEL (NOT GRUBBED).

D) AT PROJECT COMPLETION, ALL TEMPORARY ACCESS ROADS AND PATHS WILL BE OBLITERATED, AND THE SOIL WILL BE STABILIZED AND REVEGETATED. ROAD AND PATH OBLITERATION REFERS TO THE MOST COMPREHENSIVE DEGREE OF DECOMMISSIONING AND INVOLVES DECOMPACTING THE SURFACE AND DITCH, PULLING THE FILL MATERIAL ONTO THE RUNNING SURFACE, AND RESHAPING TO MATCH THE ORIGINAL CONTOUR.

E) TEMPORARY ROADS AND PATHS IN WET AREAS OR AREAS PRONE TO FLOODING WILL BE OBLITERATED BY THE END OF THE IN-WATER WORK WINDOW.

6) TEMPORARY STREAM CROSSINGS.

A) EXISTING STREAM CROSSINGS WILL BE PREFERENTIALLY USED WHENEVER REASONABLE, AND THE NUMBER OF TEMPORARY STREAM CROSSINGS WILL BE MINIMIZED.

B) TEMPORARY BRIDGES AND CULVERTS WILL BE INSTALLED TO ALLOW FOR EQUIPMENT AND VEHICLE CROSSING OVER PERENNIAL STREAMS DURING CONSTRUCTION. TREATED WOOD SHALL NOT BE USED ON TEMPORARY BRIDGE CROSSINGS OR IN LOCATIONS IN CONTACT WITH OR OVER WATER.

C) EQUIPMENT AND VEHICLES WILL CROSS THE STREAM IN THE WET ONLY WHERE:

- I. THE STREAMBED IS BEDROCK; OR
- II. MATS OR OFF-SITE LOGS ARE PLACED IN THE STREAM AND USED AS A CROSSING.

D) VEHICLES AND MACHINERY WILL CROSS STREAMS AT RIGHT ANGLES TO THE MAIN CHANNEL WHEREVER POSSIBLE.

E) THE LOCATION OF THE TEMPORARY CROSSING WILL AVOID AREAS THAT MAY INCREASE THE RISK OF CHANNEL RE-ROUTING OR AVULSION.

F) POTENTIAL SPAWNING HABITAT (I.E., POOL TAILOUTS) AND POOLS WILL BE AVOIDED TO THE MAXIMUM EXTENT POSSIBLE.

G) NO STREAM CROSSINGS WILL OCCUR AT ACTIVE SPAWNING SITES, WHEN HOLDING ADULT LISTED FISH ARE PRESENT, OR WHEN EGGS OR ALEVINS ARE IN THE GRAVEL. THE APPROPRIATE STATE FISH AND WILDLIFE AGENCY WILL BE CONTACTED FOR SPECIFIC TIMING INFORMATION.

H) AFTER PROJECT COMPLETION, TEMPORARY STREAM CROSSINGS WILL BE OBLITERATED AND THE STREAM CHANNEL AND BANKS RESTORED.

7) STAGING, STORAGE, AND STOCKPILE AREAS.

A) STAGING AREAS (USED FOR CONSTRUCTION EQUIPMENT STORAGE, VEHICLE STORAGE, FUELING, SERVICING, AND HAZARDOUS MATERIAL STORAGE) WILL BE 150 FEET OR MORE FROM ANY NATURAL WATER BODY OR WETLAND, OR ON AN ADJACENT, ESTABLISHED ROAD AREA IN A LOCATION AND MANNER THAT WILL PRECLUDE EROSION INTO OR CONTAMINATION OF THE STREAM OR FLOODPLAIN.

B) NATURAL MATERIALS USED FOR IMPLEMENTATION OF AQUATIC RESTORATION, SUCH AS LARGE WOOD, GRAVEL, AND BOULDERS, MAY BE STAGED WITHIN THE 100-YEAR FLOODPLAIN.

C) ANY LARGE WOOD, TOPSOIL, AND NATIVE CHANNEL MATERIAL DISPLACED BY CONSTRUCTION WILL BE STOCKPILED FOR USE DURING SITE RESTORATION AT A SPECIFICALLY IDENTIFIED AND FLAGGED AREA.

D) ANY MATERIAL NOT USED IN RESTORATION, AND NOT NATIVE TO THE FLOODPLAIN, WILL BE REMOVED TO A LOCATION OUTSIDE OF THE 100-YEAR FLOODPLAIN FOR DISPOSAL.

8) EQUIPMENT. MECHANIZED EQUIPMENT AND VEHICLES WILL BE SELECTED, OPERATED, AND MAINTAINED IN A MANNER THAT MINIMIZES ADVERSE EFFECTS ON THE ENVIRONMENT (E.G., MINIMALLY-SIZED, LOW PRESSURE TIRES; MINIMAL HARD-TURN PATHS FOR TRACKED VEHICLES; TEMPORARY MATS OR PLATES WITHIN WET AREAS OR ON SENSITIVE SOILS). ALL VEHICLES AND OTHER MECHANIZED EQUIPMENT WILL BE:

- A) STORED, FUELED, AND MAINTAINED IN A VEHICLE STAGING AREA PLACED 150 FEET OR MORE FROM ANY NATURAL WATER BODY OR WETLAND OR ON AN ADJACENT, ESTABLISHED ROAD AREA;
- B) REFUELED IN A VEHICLE STAGING AREA PLACED 150 FEET OR MORE FROM A NATURAL WATERBODY OR WETLAND, OR IN AN ISOLATED HARD ZONE, SUCH AS A PAVED PARKING LOT OR ADJACENT, ESTABLISHED ROAD (THIS MEASURE APPLIES ONLY TO GAS-POWERED EQUIPMENT WITH TANKS LARGER THAN 5 GALLONS);
- C) BIODEGRADABLE LUBRICANTS AND FLUIDS SHALL BE USED ON EQUIPMENT OPERATING IN AND ADJACENT TO THE STREAM CHANNEL AND LIVE WATER.
- D) INSPECTED DAILY FOR FLUID LEAKS BEFORE LEAVING THE VEHICLE STAGING AREA FOR OPERATION WITHIN 150 FEET OF ANY NATURAL WATER BODY OR WETLAND; AND
- E) THOROUGHLY CLEANED BEFORE OPERATION BELOW ORDINARY HIGH WATER, AND AS OFTEN AS NECESSARY DURING OPERATION, TO REMAIN GREASE FREE.

9) EROSION CONTROL. EROSION CONTROL MEASURES WILL BE PREPARED AND CARRIED OUT, COMMENSURATE IN SCOPE WITH THE ACTION, THAT MAY INCLUDE THE FOLLOWING:

- A) TEMPORARY EROSION CONTROLS.
 - I. TEMPORARY EROSION CONTROLS WILL BE IN PLACE BEFORE ANY SIGNIFICANT ALTERATION OF THE ACTION SITE AND APPROPRIATELY INSTALLED DOWNSLOPE OF PROJECT ACTIVITY WITHIN THE RIPARIAN BUFFER AREA UNTIL SITE REHABILITATION IS COMPLETE.
 - II. IF THERE IS A POTENTIAL FOR ERODED SEDIMENT TO ENTER THE STREAM, SEDIMENT BARRIERS WILL BE INSTALLED AND MAINTAINED FOR THE DURATION OF PROJECT IMPLEMENTATION.

III. TEMPORARY EROSION CONTROL MEASURES MAY INCLUDE FIBER WATTLES, SILT FENCES, JUTE MATTING, WOOD FIBER MULCH AND SOIL BINDER, OR GEOTEXTILES AND GEOSYNTHETIC FABRIC.

IV. SOIL STABILIZATION UTILIZING WOOD FIBER MULCH AND TACKIFIER (HYDRO-APPLIED) MAY BE USED TO REDUCE EROSION OF BARE SOIL IF THE MATERIALS ARE NOXIOUS WEED FREE AND NONTOXIC TO AQUATIC AND TERRESTRIAL ANIMALS, SOIL MICROORGANISMS, AND VEGETATION.

V. SEDIMENT WILL BE REMOVED FROM EROSION CONTROLS ONCE IT HAS REACHED 1/3 OF THE EXPOSED HEIGHT OF THE CONTROL.

VI. ONCE THE SITE IS STABILIZED AFTER CONSTRUCTION, TEMPORARY EROSION CONTROL MEASURES WILL BE REMOVED.

B) EMERGENCY EROSION CONTROLS. THE FOLLOWING MATERIALS FOR EMERGENCY EROSION CONTROL WILL BE AVAILABLE AT THE WORK SITE:

- I. A SUPPLY OF SEDIMENT CONTROL MATERIALS; AND
- II. AN OIL-ABSORBING FLOATING BOOM WHENEVER SURFACE WATER IS PRESENT.

10) DUST ABATEMENT. THE PROJECT SPONSOR WILL DETERMINE THE APPROPRIATE DUST CONTROL MEASURES BY CONSIDERING SOIL TYPE, EQUIPMENT USAGE, PREVAILING WIND DIRECTION, AND THE EFFECTS CAUSED BY OTHER EROSION AND SEDIMENT CONTROL MEASURES. IN ADDITION, THE FOLLOWING CRITERIA WILL BE FOLLOWED:

A) WORK WILL BE SEQUENCED AND SCHEDULED TO REDUCE EXPOSED BARE SOIL SUBJECT TO WIND EROSION.

B) DUST-ABATEMENT ADDITIVES AND STABILIZATION CHEMICALS (TYPICALLY MAGNESIUM CHLORIDE, CALCIUM CHLORIDE SALTS, OR LIGNINSULFONATE) WILL NOT BE APPLIED WITHIN 25 FEET OF WATER OR A STREAM CHANNEL AND WILL BE APPLIED SO AS TO MINIMIZE THE LIKELIHOOD THAT THEY WILL ENTER STREAMS. APPLICATIONS OF LIGNINSULFONATE WILL BE LIMITED TO A MAXIMUM RATE OF 0.5 GALLONS PER SQUARE YARD OF ROAD SURFACE, ASSUMING A 50:50 (LIGNINSULFONATE TO WATER) SOLUTION.

C) APPLICATION OF DUST ABATEMENT CHEMICALS WILL BE AVOIDED DURING OR JUST BEFORE WET WEATHER, AND AT STREAM CROSSINGS OR OTHER AREAS THAT COULD RESULT IN UNFILTERED DELIVERY OF THE DUST ABATEMENT MATERIALS TO A WATERBODY (TYPICALLY THESE WOULD BE AREAS WITHIN 25 FEET OF A WATERBODY OR STREAM CHANNEL; DISTANCES MAY BE GREATER WHERE VEGETATION IS SPARSE OR SLOPES ARE STEEP).

D) SPILL CONTAINMENT EQUIPMENT WILL BE AVAILABLE DURING APPLICATION OF DUST ABATEMENT CHEMICALS.

E) PETROLEUM-BASED PRODUCTS WILL NOT BE USED FOR DUST ABATEMENT.

11) SPILL PREVENTION, CONTROL, AND COUNTER MEASURES. THE USE OF MECHANIZED MACHINERY INCREASES THE RISK FOR ACCIDENTAL SPILLS OF FUEL, LUBRICANTS, HYDRAULIC FLUID, OR OTHER CONTAMINANTS INTO THE RIPARIAN ZONE OR DIRECTLY INTO THE WATER. ADDITIONALLY, UNCURED CONCRETE AND FORM MATERIALS ADJACENT TO THE ACTIVE STREAM CHANNEL MAY RESULT IN ACCIDENTAL DISCHARGE INTO THE WATER. THESE CONTAMINANTS CAN DEGRADE HABITAT, AND INJURE OR KILL AQUATIC FOOD ORGANISMS AND ESA-LISTED SPECIES. THE PROJECT SPONSOR WILL ADHERE TO THE FOLLOWING MEASURES:

- A) A DESCRIPTION OF HAZARDOUS MATERIALS THAT WILL BE USED, INCLUDING INVENTORY, STORAGE, AND HANDLING PROCEDURES WILL BE AVAILABLE ON-SITE.
- B) WRITTEN PROCEDURES FOR NOTIFYING ENVIRONMENTAL RESPONSE AGENCIES WILL BE POSTED AT THE WORK SITE.
- C) SPILL CONTAINMENT KITS (INCLUDING INSTRUCTIONS FOR CLEANUP AND DISPOSAL) ADEQUATE FOR THE TYPES AND QUANTITY OF HAZARDOUS MATERIALS USED AT THE SITE WILL BE AVAILABLE AT THE WORK SITE.
- D) WORKERS WILL BE TRAINED IN SPILL CONTAINMENT PROCEDURES AND WILL BE INFORMED OF THE LOCATION OF SPILL CONTAINMENT KITS.
- E) ANY WASTE LIQUIDS GENERATED AT THE STAGING AREAS WILL BE TEMPORARILY STORED UNDER AN IMPERVIOUS COVER, SUCH AS A TARPULIN, UNTIL THEY CAN BE PROPERLY TRANSPORTED TO AND DISPOSED OF AT A FACILITY THAT IS APPROVED FOR RECEIPT OF HAZARDOUS MATERIALS.



NO.	BY	DATE	REVISION DESCRIPTION

MM DRAWN	MM DESIGNED	MM,LH CHECKED
MM APPROVED	6/4/18 DATE	PROJECT

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HIP III GENERAL
CONSERVATION MEASURES
(1 OF 2)

SHEET
3 OF 9

WORK AREA ISOLATION & FISH SALVAGE.

ANY WORK AREA WITHIN THE WETTED CHANNEL WILL BE ISOLATED FROM THE ACTIVE STREAM WHENEVER ESA-LISTED FISH ARE REASONABLY CERTAIN TO BE PRESENT, OR IF THE WORK AREA IS LESS THAN 300- FEET UPSTREAM FROM KNOWN SPAWNING HABITATS. WHEN WORK AREA ISOLATION IS REQUIRED, DESIGN PLANS WILL INCLUDE ALL ISOLATION ELEMENTS, FISH RELEASE AREAS, AND, WHEN A PUMP IS USED TO DEWATER THE ISOLATION AREA AND FISH ARE PRESENT, A FISH SCREEN THAT MEETS NMFS'S FISH SCREEN CRITERIA (NMFS 2011, OR MOST CURRENT). WORK AREA ISOLATION AND FISH CAPTURE ACTIVITIES WILL OCCUR DURING PERIODS OF THE COOLEST AIR AND WATER TEMPERATURES POSSIBLE, NORMALLY EARLY IN THE MORNING VERSUS LATE IN THE DAY, AND DURING CONDITIONS APPROPRIATE TO MINIMIZE STRESS AND DEATH OF SPECIES PRESENT.

- NATIONAL MARINE FISHERIES SERVICE. 2011. ANADROMOUS SALMONID PASSAGE FACILITY DESIGN. NORTHWEST REGION. AVAILABLE ONLINE AT:

[HTTP://WWW.NWR.NOAA.GOV/SALMON-HYDROPOWER/FERC/UPLOAD/FISH-PASSAGE-DESIGN.PDF](http://www.nwr.noaa.gov/salmon-hydropower/ferc/upload/fish-passage-design.pdf)

- U.S. FISH AND WILDLIFE SERVICE. 2010. BEST MANAGEMENT PRACTICES TO MINIMIZE ADVERSE EFFECTS TO PACIFIC LAMPREY.

[HTTP://WWW.FWS.GOV/PACIFIC/FISHERIES/SPHABCON/LAMPREY/PDF/BEST%20MANAGEMENT%20PRACTICES%20FOR%20PACIFIC%20LAMPREY%20APRIL%202010%20VERSION.PDF](http://www.fws.gov/pacific/fisheries/sphabcon/lamprey/pdf/best%20management%20practices%20for%20pacific%20lamprey%20april%202010%20version.pdf)

FOR SALVAGE OPERATIONS IN KNOWN BULL TROUT SPAWNING AND REARING HABITAT, ELECTROFISHING SHALL ONLY OCCUR FROM MAY 1 TO JULY 31. NO ELECTROFISHING WILL OCCUR IN ANY BULL TROUT OCCUPIED HABITAT AFTER AUGUST 15. BULL TROUT ARE VERY TEMPERATURE SENSITIVE AND GENERALLY SHOULD NOT BE ELECTROSHOCKED OR OTHERWISE HANDLED WHEN TEMPERATURES EXCEED 15 DEGREES CELSIUS. SALVAGE ACTIVITIES SHOULD TAKE PLACE DURING PERIODS OF THE COOLEST AIR AND WATER TEMPERATURES POSSIBLE, NORMALLY EARLY IN THE MORNING VERSUS LATE IN THE DAY, AND DURING CONDITIONS APPROPRIATE TO MINIMIZE STRESS TO FISH SPECIES PRESENT.

SALVAGE OPERATIONS WILL FOLLOW THE ORDERING, METHODOLOGIES, AND CONSERVATION MEASURES SPECIFIED BELOW IN STEPS 1 THROUGH 6. STEPS 1 AND 2 WILL BE IMPLEMENTED FOR ALL PROJECTS WHERE WORK AREA ISOLATION IS NECESSARY ACCORDING TO CONDITIONS ABOVE. ELECTROFISHING (STEP 3) CAN BE IMPLEMENTED TO ENSURE ALL FISH HAVE BEEN REMOVED FOLLOWING STEPS 1 AND 2, OR WHEN OTHER MEANS OF FISH CAPTURE MAY NOT BE FEASIBLE OR EFFECTIVE. DEWATERING AND REWATERING (STEPS 4 AND 5) WILL BE IMPLEMENTED UNLESS WETTED IN-STREAM WORK IS DEEMED TO BE MINIMALLY HARMFUL TO FISH, AND IS BENEFICIAL TO OTHER AQUATIC SPECIES. DEWATERING WILL NOT BE CONDUCTED IN AREAS KNOWN TO BE OCCUPIED BY LAMPREY, UNLESS LAMPREYS ARE SALVAGED USING GUIDANCE SET FORTH IN US FISH AND WILDLIFE SERVICE (2010)3.

1) ISOLATE.

- A) BLOCK NETS WILL BE INSTALLED AT UPSTREAM AND DOWNSTREAM LOCATIONS AND MAINTAINED IN A SECURED POSITION TO EXCLUDE FISH FROM ENTERING THE PROJECT AREA.
- B) BLOCK NETS WILL BE SECURED TO THE STREAM CHANNEL BED AND BANKS UNTIL FISH CAPTURE AND TRANSPORT ACTIVITIES ARE COMPLETE. BLOCK NETS MAY BE LEFT IN PLACE FOR THE DURATION OF THE PROJECT TO EXCLUDE FISH.
- C) IF BLOCK NETS REMAIN IN PLACE MORE THAN ONE DAY, THE NETS WILL BE MONITORED AT LEAST DAILY TO ENSURE THEY ARE SECURED TO THE BANKS AND FREE OF ORGANIC ACCUMULATION. IF THE PROJECT IS WITHIN BULL TROUT SPAWNING AND REARING HABITAT, THE BLOCK NETS MUST BE CHECKED EVERY FOUR HOURS FOR FISH IMPINGEMENT ON THE NET. LESS FREQUENT INTERVALS MUST BE APPROVED THROUGH A VARIANCE REQUEST.
- D) NETS WILL BE MONITORED HOURLY ANYTIME THERE IS INSTREAM DISTURBANCE.

2) SALVAGE. AS DESCRIBED BELOW, FISH TRAPPED WITHIN THE ISOLATED WORK AREA WILL BE CAPTURED TO MINIMIZE THE RISK OF INJURY, THEN RELEASED AT A SAFE SITE:

- A) REMOVE AS MANY FISH AS POSSIBLE PRIOR TO DEWATERING.
- B) DURING DEWATERING, ANY REMAINING FISH WILL BE COLLECTED BY HAND OR DIP NETS.
- C) SEINES WITH A MESH SIZE TO ENSURE CAPTURE OF THE RESIDING ESA-LISTED FISH WILL BE USED.
- D) MINNOW TRAPS WILL BE LEFT IN PLACE OVERNIGHT AND USED IN CONJUNCTION WITH SEINING.
- E) IF BUCKETS ARE USED TO TRANSPORT FISH:
 - I. THE TIME FISH ARE IN A TRANSPORT BUCKET WILL BE LIMITED, AND WILL BE RELEASED AS QUICKLY AS POSSIBLE;
 - II. THE NUMBER OF FISH WITHIN A BUCKET WILL BE LIMITED BASED ON SIZE, AND FISH WILL BE OF RELATIVELY COMPARABLE SIZE TO MINIMIZE PREDATION;

III. AERATORS FOR BUCKETS WILL BE USED OR THE BUCKET WATER WILL BE FREQUENTLY CHANGED WITH COLD CLEAR WATER AT 15 MINUTE OR MORE FREQUENT INTERVALS.

IV. BUCKETS WILL BE KEPT IN SHADED AREAS OR WILL BE COVERED BY A CANOPY IN EXPOSED AREAS.

V. DEAD FISH WILL NOT BE STORED IN TRANSPORT BUCKETS, BUT WILL BE LEFT ON THE STREAM BANK TO AVOID MORTALITY COUNTING ERRORS.

F) AS RAPIDLY AS POSSIBLE (ESPECIALLY FOR TEMPERATURE-SENSITIVE BULL TROUT), FISH WILL BE RELEASED IN AN AREA THAT PROVIDES ADEQUATE COVER AND FLOW REFUGE. UPSTREAM RELEASE IS GENERALLY PREFERRED, BUT FISH RELEASED DOWNSTREAM WILL BE SUFFICIENTLY OUTSIDE OF THE INFLUENCE OF CONSTRUCTION.

G) SALVAGE WILL BE SUPERVISED BY A QUALIFIED FISHERIES BIOLOGIST EXPERIENCED WITH WORK AREA ISOLATION AND COMPETENT TO ENSURE THE SAFE HANDLING OF ALL FISH.

3) ELECTROFISHING. ELECTROFISHING WILL BE USED ONLY AFTER OTHER SALVAGE METHODS HAVE BEEN EMPLOYED OR WHEN OTHER MEANS OF FISH CAPTURE ARE DETERMINED TO NOT BE FEASIBLE OR EFFECTIVE. IF ELECTROFISHING WILL BE USED TO CAPTURE FISH FOR SALVAGE, THE SALVAGE OPERATION WILL BE LED BY AN EXPERIENCED FISHERIES BIOLOGIST AND THE FOLLOWING GUIDELINES WILL BE FOLLOWED:

A) THE NMFS'S ELECTROFISHING GUIDELINES (NMFS 2000).

B) ONLY DIRECT CURRENT (DC) OR PULSED DIRECT CURRENT (PDC) WILL BE USED AND CONDUCTIVITY MUST BE TESTED.

I. IF CONDUCTIVITY IS LESS THAN 100 S, VOLTAGE RANGES FROM 900 TO 1100 WILL BE USED.

II. FOR CONDUCTIVITY RANGES BETWEEN 100 TO 300 S, VOLTAGE RANGES WILL BE 500 TO 800.

III. FOR CONDUCTIVITY GREATER THAN 300 S, VOLTAGE WILL BE LESS THAN 400.

C) ELECTROFISHING WILL BEGIN WITH A MINIMUM PULSE WIDTH AND RECOMMENDED VOLTAGE AND THEN GRADUALLY INCREASE TO THE POINT WHERE FISH ARE IMMOBILIZED.

D) THE ANODE WILL NOT INTENTIONALLY CONTACT FISH.

E) ELECTROFISHING SHALL NOT BE CONDUCTED WHEN THE WATER CONDITIONS ARE TURBID AND VISIBILITY IS POOR. THIS CONDITION MAY BE EXPERIENCED WHEN THE SAMPLER CANNOT SEE THE STREAM BOTTOM IN ONE FOOT OF WATER.

F) IF MORTALITY OR OBVIOUS INJURY (DEFINED AS DARK BANDS ON THE BODY, SPINAL DEFORMATIONS, DE-SCALING OF 25% OR MORE OF BODY, AND TORPIDITY OR INABILITY TO MAINTAIN UPRIGHT ATTITUDE AFTER SUFFICIENT RECOVERY TIME) OCCURS DURING ELECTROFISHING, OPERATIONS WILL BE IMMEDIATELY DISCONTINUED, MACHINE SETTINGS, WATER TEMPERATURE AND CONDUCTIVITY CHECKED, AND PROCEDURES ADJUSTED OR ELECTROFISHING POSTPONED TO REDUCE MORTALITY.

4) DEWATER. DEWATERING, WHEN NECESSARY, WILL BE CONDUCTED OVER A SUFFICIENT PERIOD OF TIME TO ALLOW SPECIES TO NATURALLY MIGRATE OUT OF THE WORK AREA AND WILL BE LIMITED TO THE SHORTEST LINEAR EXTENT PRACTICABLE.

A) DIVERSION AROUND THE CONSTRUCTION SITE MAY BE ACCOMPLISHED WITH A COFFER DAM AND A BY-PASS CULVERT OR PIPE, OR A LINED, NON-ERODIBLE DIVERSION DITCH. WHERE GRAVITY FEED IS NOT POSSIBLE, A PUMP MAY BE USED, BUT MUST BE OPERATED IN SUCH A WAY AS TO AVOID REPETITIVE DEWATERING AND REWATERING OF THE SITE. IMPOUNDMENT BEHIND THE COFFERDAM MUST OCCUR SLOWLY THROUGH THE TRANSITION, WHILE CONSTANT FLOW IS DELIVERED TO THE DOWNSTREAM REACHES.

B) ALL PUMPS WILL HAVE FISH SCREENS TO AVOID JUVENILE FISH IMPINGEMENT OR ENTRAINMENT, AND WILL BE OPERATED IN ACCORDANCE WITH NMFS'S CURRENT FISH SCREEN CRITERIA (NMFS 2011, OR MOST RECENT VERSION). IF THE PUMPING RATE EXCEEDS 3 CUBIC FEET SECOND (CFS), A NMFS HYDRO FISH PASSAGE REVIEW WILL BE NECESSARY.

C) DISSIPATION OF FLOW ENERGY AT THE BYPASS OUTFLOW WILL BE PROVIDED TO PREVENT DAMAGE TO RIPARIAN VEGETATION OR STREAM CHANNEL.

D) SAFE REENTRY OF FISH INTO THE STREAM CHANNEL WILL BE PROVIDED, PREFERABLY INTO POOL HABITAT WITH COVER, IF THE DIVERSION ALLOWS FOR DOWNSTREAM FISH PASSAGE.

E) SEEPAGE WATER WILL BE PUMPED TO A TEMPORARY STORAGE AND TREATMENT SITE OR INTO UPLAND AREAS TO ALLOW WATER TO PERCOLATE THROUGH SOIL OR TO FILTER THROUGH VEGETATION PRIOR TO REENTERING THE STREAM CHANNEL.

4 NATIONAL MARINE FISHERIES SERVICE. 2011. ANADROMOUS SALMONID PASSAGE FACILITY DESIGN. NORTHWEST REGION. AVAILABLE ONLINE AT:

[HTTP://WWW.NWR.NOAA.GOV/SALMON-HYDROPOWER/FERC/UPLOAD/FISH-PASSAGE-DESIGN.PDF](http://www.nwr.noaa.gov/salmon-hydropower/ferc/upload/fish-passage-design.pdf)

5) SALVAGE NOTICE. MONITORING AND RECORDING OF FISH PRESENCE, HANDLING, AND MORTALITY MUST OCCUR DURING THE DURATION OF THE ISOLATION, SALVAGE, ELECTROFISHING, DEWATERING, AND REWATERING OPERATIONS. ONCE OPERATIONS ARE COMPLETED, A SALVAGE REPORT WILL DOCUMENT PROCEDURES USED, ANY FISH INJURIES OR DEATHS (INCLUDING NUMBERS OF FISH AFFECTED), AND CAUSES OF ANY DEATHS.

CONSTRUCTION AND POST-CONSTRUCTION CONSERVATION MEASURES.

1) FISH PASSAGE. FISH PASSAGE WILL BE PROVIDED FOR ANY ADULT OR JUVENILE FISH LIKELY TO BE PRESENT IN THE ACTION AREA DURING CONSTRUCTION, UNLESS PASSAGE DID NOT EXIST BEFORE CONSTRUCTION OR THE STREAM IS NATURALLY IMPASSABLE AT THE TIME OF CONSTRUCTION. IF THE PROVISION OF TEMPORARY FISH PASSAGE DURING CONSTRUCTION WILL INCREASE NEGATIVE EFFECTS ON AQUATIC SPECIES OF INTEREST OR THEIR HABITAT, A VARIANCE CAN BE REQUESTED FROM THE NMFS BRANCH CHIEF AND THE FWS FIELD OFFICE SUPERVISOR. PERTINENT INFORMATION, SUCH AS THE SPECIES AFFECTED, LENGTH OF STREAM REACH AFFECTED, PROPOSED TIME FOR THE PASSAGE BARRIER, AND ALTERNATIVES CONSIDERED, WILL BE INCLUDED IN THE VARIANCE REQUEST.

2) CONSTRUCTION AND DISCHARGE WATER.

A) SURFACE WATER MAY BE DIVERTED TO MEET CONSTRUCTION NEEDS, BUT ONLY IF DEVELOPED SOURCES ARE UNAVAILABLE OR INADEQUATE.

B) DIVERSIONS WILL NOT EXCEED 10% OF THE AVAILABLE FLOW.

C) ALL CONSTRUCTION DISCHARGE WATER WILL BE COLLECTED AND TREATED USING THE BEST AVAILABLE TECHNOLOGY APPLICABLE TO SITE CONDITIONS.

D) TREATMENTS TO REMOVE DEBRIS, NUTRIENTS, SEDIMENT, PETROLEUM HYDROCARBONS, METALS AND OTHER POLLUTANTS LIKELY TO BE PRESENT WILL BE PROVIDED.



NO.	BY	DATE	REVISION DESCRIPTION

MM DRAWN	MM DESIGNED	MM,LH CHECKED
MM APPROVED	6/4/18 DATE	PROJECT

**CONFEDERATED TRIBES AND BANDS OF THE YAKAMA NATION
TEPEE CREEK STREAM ENHANCEMENT PROJECT
WHITE SWAN, WA**



501 Portway Avenue, Suite 101
Hood River, OR 97031
541.386.9003
www.interfluve.com

**HIP III GENERAL
CONSERVATION MEASURES
(2 OF 2)**

SHEET
4 OF 9



PROJECT AREA
SHEET 5

AERIAL VIEW



NO.	BY	DATE	REVISION DESCRIPTION

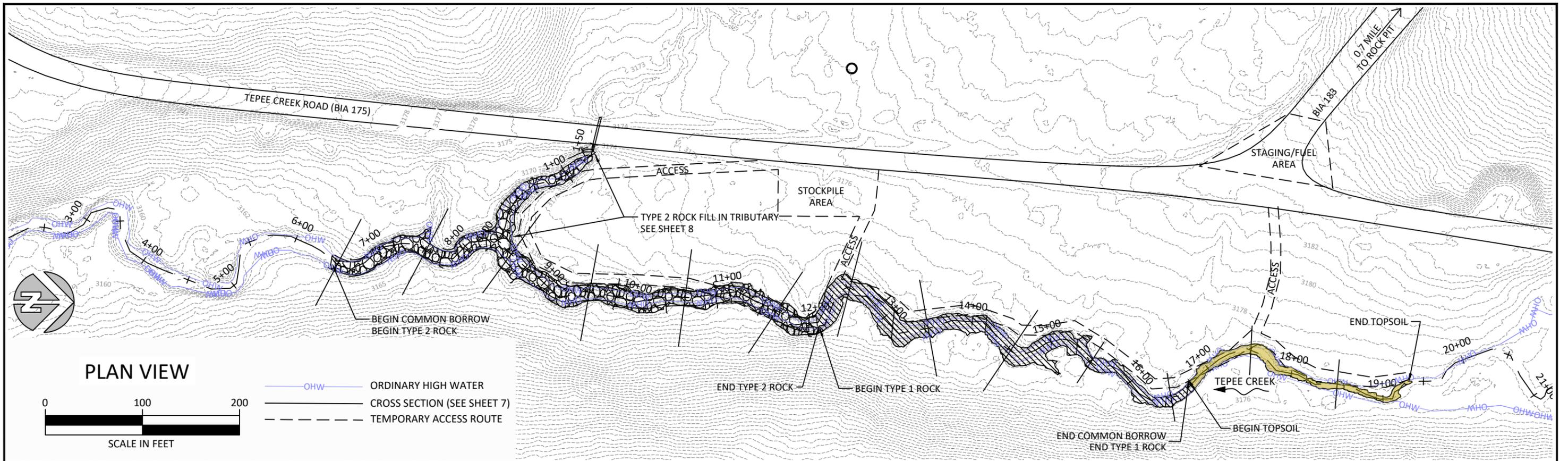
MM DRAWN	MM DESIGNED	MM,LH CHECKED
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AERIAL VIEW OF SITE



PLAN VIEW

— OHW — ORDINARY HIGH WATER
 — CROSS SECTION (SEE SHEET 7)
 - - - TEMPORARY ACCESS ROUTE

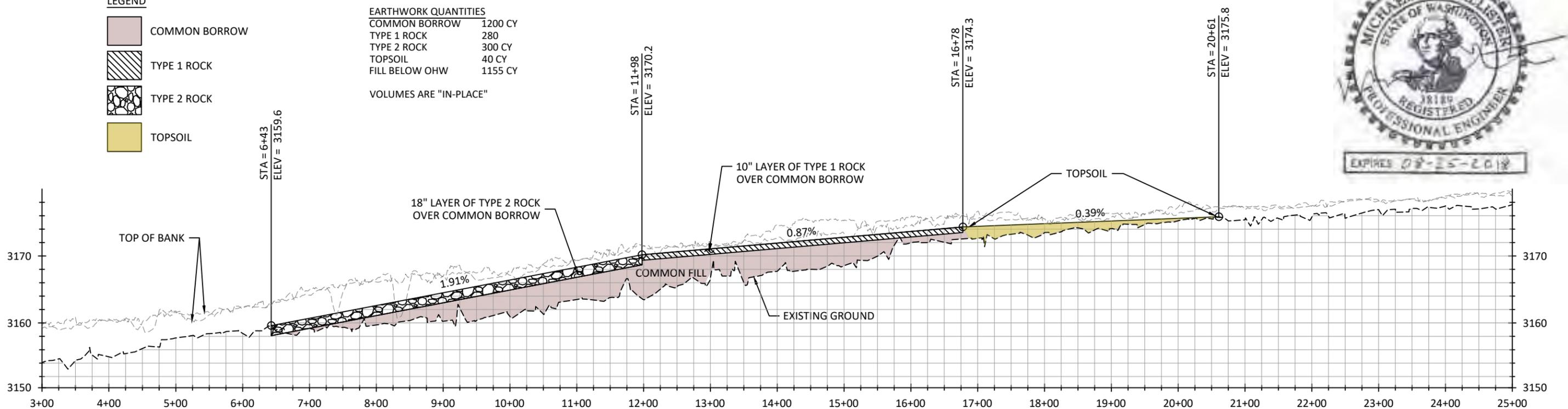
LEGEND

- COMMON BORROW
- TYPE 1 ROCK
- TYPE 2 ROCK
- TOPSOIL

EARTHWORK QUANTITIES

COMMON BORROW	1200 CY
TYPE 1 ROCK	280
TYPE 2 ROCK	300 CY
TOPSOIL	40 CY
FILL BELOW OHW	1155 CY

VOLUMES ARE "IN-PLACE"



PROFILE VIEW

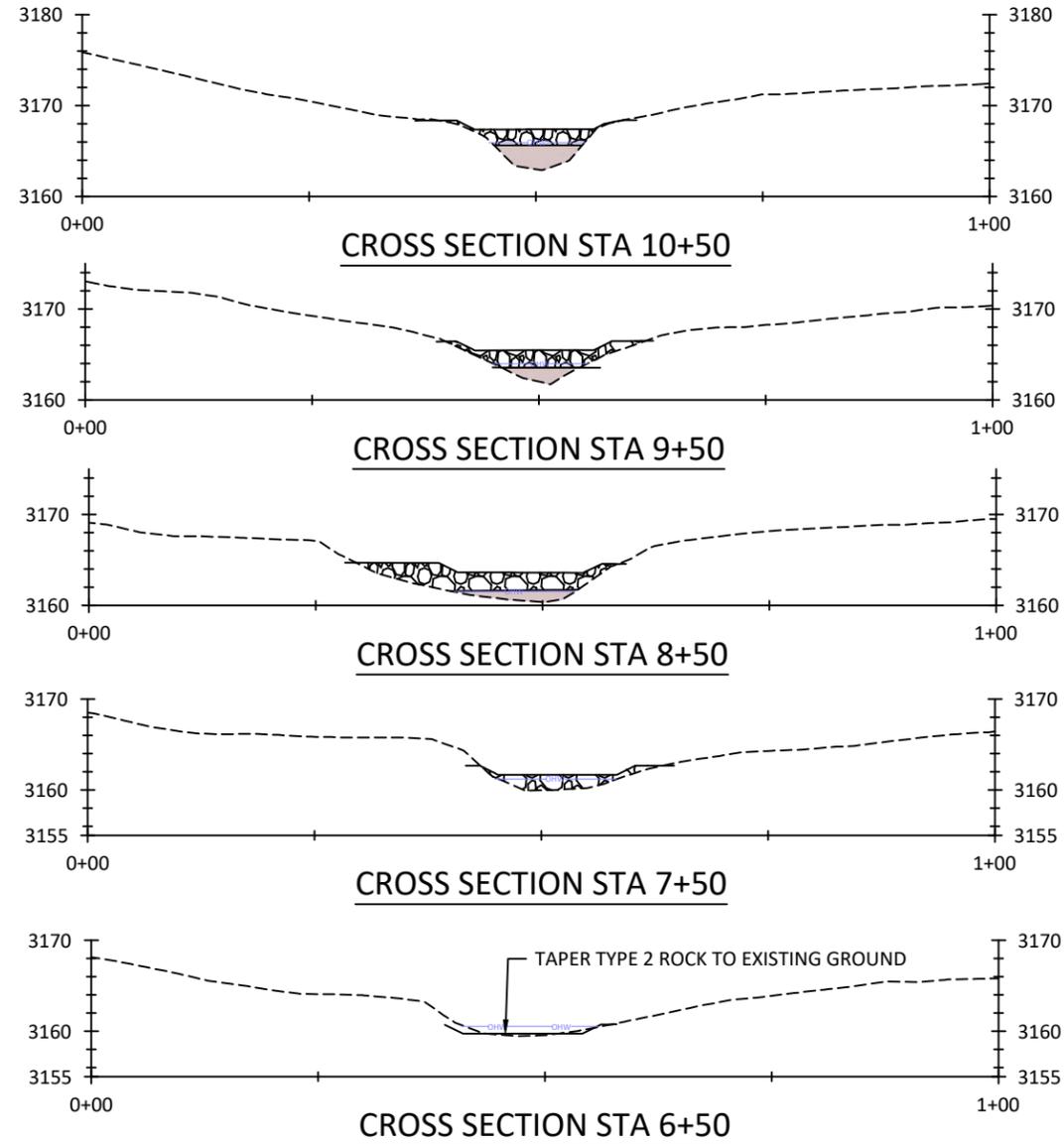
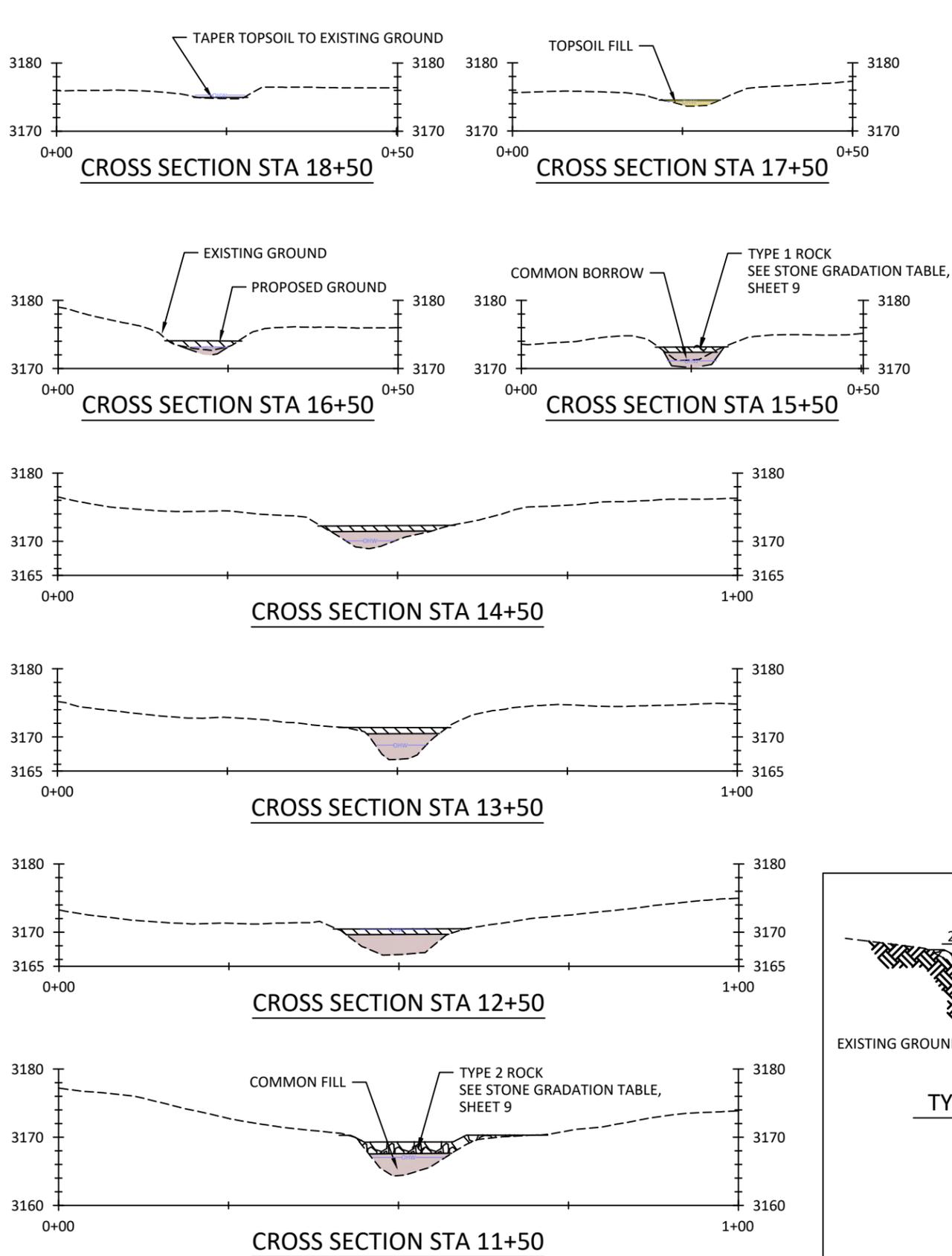
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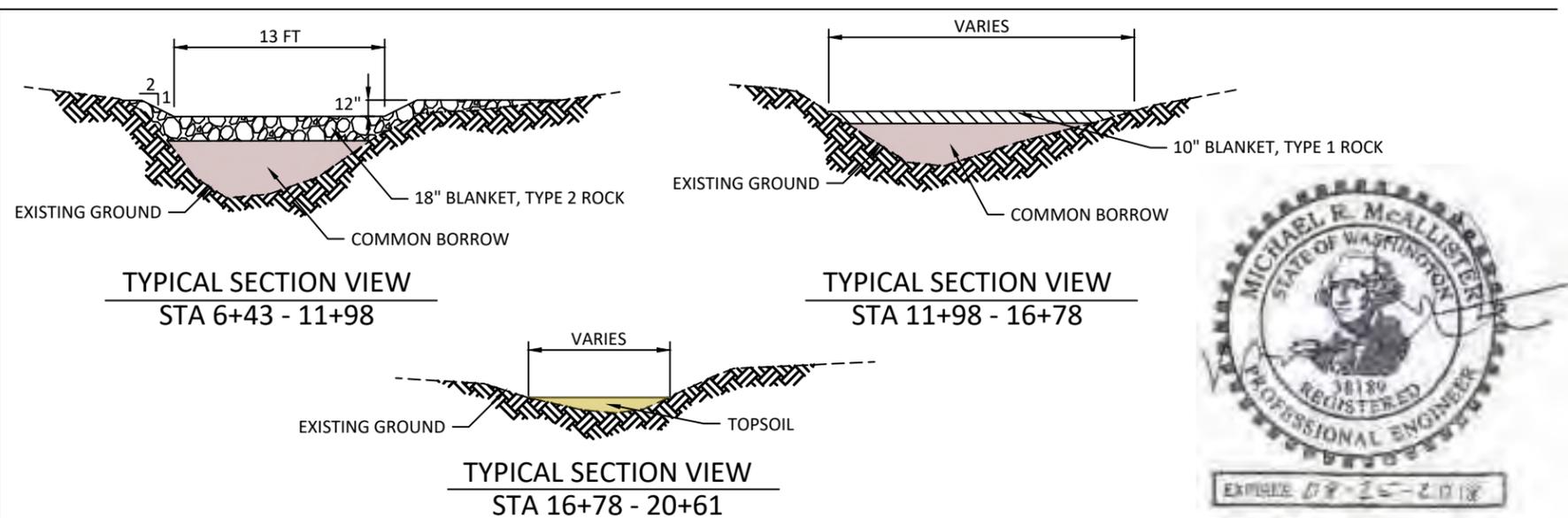
CHANNEL PLAN AND PROFILE



LEGEND

- COMMON BORROW
- TYPE 1 ROCK
- TYPE 2 ROCK
- TOPSOIL

SECTIONS VIEWED LOOKING DOWNSTREAM



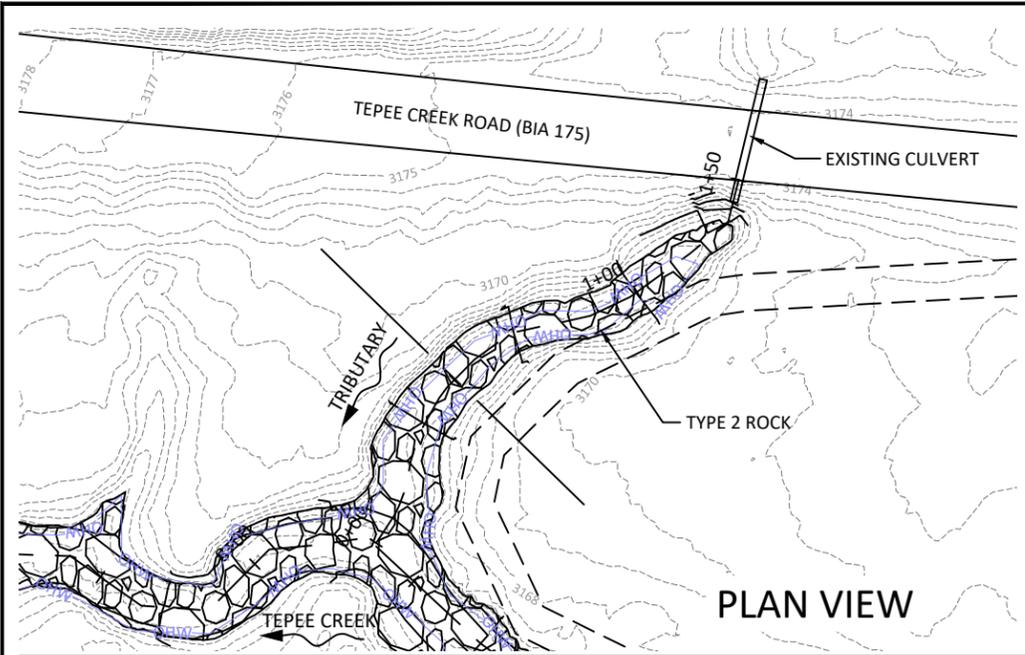
NO.	BY	DATE	REVISION DESCRIPTION

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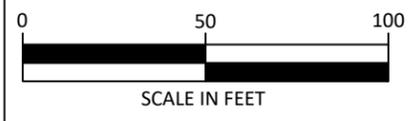
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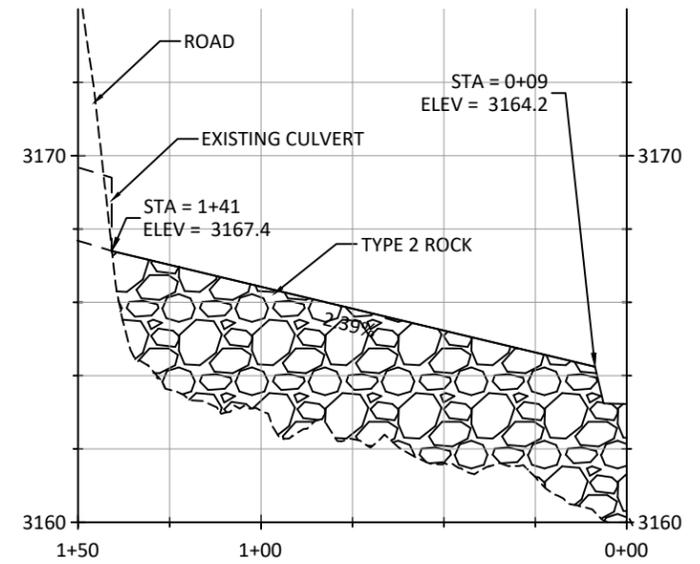
SECTION VIEWS



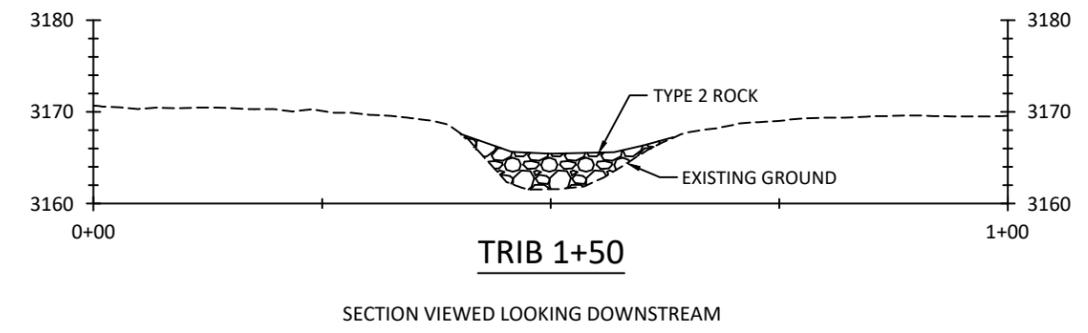
- LEGEND**
- OHW — ORDINARY HIGH WATER
 - — CROSS SECTION
 - - - - - TEMPORARY ACCESS ROUTE



PLAN VIEW



PROFILE VIEW



QUANTITY
150 CY TYPE 2 ROCK



NO.	BY	DATE	REVISION DESCRIPTION

MM	MM	MM, LH
DRAWN	DESIGNED	CHECKED
MM	6/4/18	
APPROVED	DATE	PROJECT

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TRIBUTARY PLAN, PROFILE,
AND SECTION

The Washington State Department of Transportation's Standard Specifications for Road, Bridge and Municipal Construction 2014 (WSDOT Standard Specifications) shall apply unless otherwise added or amended in the following Special Provisions. The "Contracting Agency" or "Owner" shall be the Confederated Tribes and Bands of the Yakama Nation. Sections 1-02, 1-03, and 1-08 (except 1-08.6, 1-08.7, 1-08.8) of the Standard Specifications do not apply.

ITEM 001- TESC, SPCC PLAN AND IMPLEMENTATION

Description

This work shall provide for preparation, implementation, and removal of a Temporary Erosion Sediment Control (TESC) plan and for the preparation and implementation of a Spill Prevention Control and Countermeasure (SPCC) plan in accordance with Section 1-07.15 of the Standard Specifications, and as amended by these Special Provisions.

- The Contractor shall submit a TESC for the project to the Owner for approval. The TESC must satisfy the requirements of the Washington Department of Ecology NPDES Stormwater General Permit for Construction Activity and all other applicable permits. The TESC included in the Drawings and described herein is intended to provide a baseline for sediment and erosion control and does not ensure that the standards established by any applicable permits will be met. The Contractor may use these measures or alternative measures of his own design to ensure satisfactory performance and that the erosion control requirements of all applicable permits are met. The contractor shall be named as the permit holder. The contractor shall be responsible for implementing, inspecting and filing reports, maintaining, replacing, and removing TESC and SPCC measures. The plan shall include the name, address and 24-hour contact number of the person responsible for erosion prevention and sediment control measures.
- A spill Containment Kit shall be on site and crews shall be trained in its use.

Measurement

"TESC, SPCC Plan and Implementation," including the above amendments to the item will be measured by lump sum.

Payment

Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified. Payment will be made in accordance with Section 1-04.1 for the following bid items: "TESC, SPCC Plan and Implementation" per lump sum.

ITEM 002 - MOBILIZATION

This item shall consist of preparation work and operations performed by the Contractor in accordance with the provisions of Section 1-09.7 of the Washington Department of Transportation Standard Specifications (Standard Specifications) and amended as described below.

The Owner will designate temporary access routes and stockpile areas prior to construction. Temporary site access routes shall be adhered to so that impacts to the site are minimized.

Measurement and Payment

Payment for Mobilization shall be by the lump sum contract price for, 'Mobilization', partial payments will be made as in accordance with Section 1-09.9 of the Standard Specifications. Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified.

ITEM 003 - STRIPPING

Stripping consist of the removal of the top 6" of surface soil in areas designated by the Owner. Stripped soil may be used as Common Fill provided it does not comprise more than 10% of the fill.

Measurement

Excavation, haul, and stockpiling materials shall be included in this item.

Payment

Payment for "Stripping" will be made per Acre.

ITEM 006 - EMBANKMENT CONSTRUCTION (CHANNEL FILL)

Description

This item loading, hauling, placing fill, and embankment compacting channel fill material in accordance with Section 2-03 of the Standard Specifications, and as amended by these Special Provisions.

- This item includes loading and hauling fill materials. Common Fill, Type 1 Rock, and Type 2 Rock shall be loaded and hauled from borrow areas provided by the Owner. Topsoil shall be furnished by the Contractor. For all fill materials, the unit contract price per cubic yard shall include "Haul".
- This item includes detail grading to shape the channel as shown in the Plans.
- No work shall occur outside of the limits of disturbance shown in the Plans unless authorized by the Owner.
- Apply Common Borrow and Topsoil in 8" lifts and compact. Apply Type 1 and Type 2 Rock in 6-9" lifts and compact. Compacting shall be by bucket compaction to a visibly compacted state.

Materials

Materials shall meet the requirements of Common Borrow and Topsoil (Earth Embankment), and Type 1 and Type 2 Rock (Rock Embankment) with size gradation as follows:

COMMON BORROW WILL BE GRANULAR OR NONGRANULAR SOIL COLLECTED FROM ONE OR MORE SOURCES PROVIDED BY THE OWNER

TOPSOIL SHALL BE "TOPSOIL TYPE C", MEETING THE REQUIREMENTS OF 8-02.3(4)B AND 9.14.1(3).

TYPE 1 ROCK - GRADATION		TYPE 2 ROCK - GRADATION	
Screen	Percent Passing	Screen	Percent Passing
7"	100	12"	100
6"	85	10"	85
5"	50	8"	50
4"	30	6"	30
1/2"	15	3/4"	15
#200	5	#200	5

Construction

Apply Common Borrow and Topsoil in 8" lifts and compact. Apply Type 1 and Type 2 Rock in 6-9" lifts and compact. Compacting shall be by bucket compaction to a visibly compacted state.

Measurement

"Embankment Construction Incl. Haul" shall be measured by cubic yard for Topsoil, Common Borrow, Type 1 Rock, and Type 2 Rock. All material will be measured in the position it occupies after placement and compaction. An original ground measurement was taken using digital terrain modeling survey techniques. The original ground will be compared with the planned finished section shown in the Plans. Slope/ground intercept points defining the limits of the measurement will be as staked by the Owner. No additional compensation will be made for excavated material that is stockpiled and moved again.

Payment

Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified. Payment will be made in accordance with Section 1-04.1 for the following bid items: "Embankment Construction Incl. Haul" per cubic yard.



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DRAWN	DESIGNED	CHECKED
MM	6/4/18	
APPROVED	DATE	PROJECT

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SPECIFICATIONS

APPENDIX C

Glossary of Terms

CONTRACTOR	Contractor to be selected for the performance of work under this Bid Package.
Contractor Responsibilities	See Section II of this Contractor's Bid Package.
Equipment Requirements	See Section IV of this Contractor's Bid Package.
FINAL RELEASE	See last page of this Contractor's Bid Package.
Fish Window	The in-water work window specified under "Timing Limitations" in the YN Hydraulic Project Approval, shall apply.
Indian Preference Requirements	See Appendix E.
Mobilization	Arrival of all equipment and personnel at work site in working order.
OWNER	Yakama Nation
Permits	Tribal permits that list conditions under which the work can be performed. These include, but are not necessarily limited to, the permits identified in Appendix F.
Personnel Requirements	See Section IV of this Contractor's Bid Package.

APPENDIX D

Insurance Requirements and Other Documents Requiring Execution

1. Required Insurance: Contractor, at its sole cost and expense (including the cost of all deductibles), shall procure and maintain in force while performing services for Yakama Nation the following insurance:
 - a. Workers Compensation Insurance, covering applicable statutory benefits in the State where the work is being performed; Employer's Liability Insurance in an amount of not less than \$1,000,000 and (when applicable) the policy will be endorsed to cover benefits.
 - b. Commercial General Liability Insurance, on a per occurrence basis, endorsed to cover on the premises operations, products/completed operations, personal injury and the contractual indemnity obligations of this agreement with limits of not less than \$2,000,000 per occurrence.
 - c. Automobile Liability Insurance, including Liability insurance coverage for vehicles which may be used by Contractor in connection with this contract, with Limits of Liability of not less than \$1,000,000 per occurrence.
 - d. Should the Services supplied under this Agreement include waste disposal operations, Pollution or Environmental Impairment Liability Insurance, with limits of not less than \$1,000,000 per occurrence. Should Federal, State or local regulatory body require insurance with higher limits, then such requirements shall apply in lieu of the specified \$1,000,000 limits.

The Workers Compensation/Employers Liability Insurance Policy will be endorsed to waive all rights of subrogation against the Yakama Nation.

The aforesaid policies will be endorsed to provide the Yakama Nation thirty (30) days written notice prior to cancellation or reduction in coverage required by this agreement. The insurance policy shall be issued by insurance companies with a Bests rating of 'B' or better or equivalent and shall be subject to Buyer's approval, such approval not to be unreasonably withheld.

Contractor shall require all Subcontractors performing services under this contract to maintain in force insurance of the types and amounts specified herein.

2. Other Documents Requiring Execution: The bidder must comply with these conditions and must submit with his bid the following signed documents:
- a. Bid Bond: Each Bid shall be accompanied by a Bid security, cashier's check, money order, or surety bid bond, in the amount of not less than five percent (5%) of the total bid based on extensions of estimated per unit costs, added to lump sum portions of the bid. Surety companies executing Bid Bonds must appear on the U.S. Treasury Departments most current list (Circular 570 as amended) and be authorized to transact business in the State of Washington. Checks shall be payable to the Yakama Nation.
 - b. Bond Costs: The costs or premiums for all bonds shall be paid by the Bidders.
 - c. Insurance Certificates: Prior to the execution of the Contract, the Bidder shall furnish in a form satisfactory to the Yakama Nation Insurance Certificates covering the faithful performance of the Contract and the payment of all obligations arising thereunder.
 - d. Power of Attorney: Attorneys-in-fact who sign Bid Bonds or Contract Bonds must file with each bond a certified and effectively dated copy of the Power of Attorney

APPENDIX E

Additional Conditions

I. Tribal Employment Rights Ordinance (TERO)

Contractor shall not discriminate in the performance of this agreement against any person because of handicap, race, age, religion or gender. Contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their handicap, race, age, religion or gender.

Notwithstanding the above paragraph, contractor shall comply with the Yakama Nation Tribal Employment Rights Ordinance (TERO) and, to the extent feasible and consistent with the efficient performance of this agreement, shall provide employment and training opportunities to Indians that are not fully qualified to perform under this agreement. Further, contractor may be required to submit a TERO compliance plan. For specific details on TERO compliance, the bidder should contact the Yakama Nation TERO Director, P.O. Box 151, Toppenish, Washington, 98948 (Telephone 509-865-5121 ext. 479).

APPENDIX F

Permits

Permit List

Local, State, and Federal permits that govern the performance of the work include but are not necessarily limited to the following:

NOAA Fisheries/USFWS	HIP III
Tribal Historic Preservation Office	SEC 106
Yakama Nation Water Code	Hydraulic Permit

**HIP III PROGRAMMATIC - CONSULTATION
PROJECT NOTIFICATION FORM
HIP III No: 2017066**

Lead Action Agency: BPA			
NMFS Tracking #: 2013/9724	Statutory Authority: <input checked="" type="checkbox"/> ESA & EFH <input type="checkbox"/> ESA		USFWS Tracking #: 01EOFW00-2013-F-0199
Date of Request:	6/19/2018		
Project Title:	Klickitat Watershed Enhancement		
BPA Project #:	1997-056-00	Contract #:	56662 REL 126; CR 309550
BPA EC Contact:	Claire McClory	Phone:	503-230-5922
Project Sponsor Contact:	David Lindley	Phone:	509-369-3565
Project Affiliation:	Yakama Nation		
NMFS Branch Office:	Columbia Basin Branch - Dale.Bambrick@noaa.gov		
USFWS Field Office:	Central Washington Field Office (Wenatchee) – Jessica_Gonzales@fws.gov		
Lat/Long: (in decimal degrees, WGS84)	Various—see below	County:	YAKIMA, WA
4th Field HUC:	17070106	HUC Name:	Klickitat

Project Start Date:	7/1/2018	Project End Date:	11/1/2018	Completed Form Due Date:	1/30/2019
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(Project Completion Form and/or Herbicide Use Form due ≤60-days after Project End Date)

Does the project consist of Invasive Plant Control only?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Does the project require near- and/or in-water construction?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Does the project require near- and/or in-water work (no construction)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Does the project require work area isolation/fish salvage?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Does the project require a variance?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Project Description

List the project activities and describe the intended result(s); tell when the project is to occur; describe how the activities will be implemented; provide any other pertinent information. Please include Work Element for each activity.

WE F. Tepee Creek Meadows Restoration (Phase 3) – Floodplain Reconnection

Lat. 46.201331 Long. -121.004816

The primary goal is to increase floodplain groundwater storage to benefit *O. mykiss* rearing habitat that is prevalent in Tepee Creek downstream of the project site. Site observations, hydrologic, and hydraulic analysis has concluded that the current channel conditions, sediment supply, and hydrology lead to degraded conditions within the reach. Work would be done between August 1 and November 30, 2018 when the channel is dry.

In order to improve conditions at the Tepee Creek project site, the channel bed will be raised by importing gravel material to the elevation that existed prior to perturbations stemming from road construction, forest practices and cattle grazing and subsequent incision. The size of the prescribed imported gravel material was informed by hydraulic modeling. The type 1 and 2 rock (6 and 12 inch minus) is of sufficient size that it will not be mobilized during high flows. The intent of the oversized rock is to impose a new geology on the stream so that regardless of future timber, grazing, and land management practices that are outside the scope and domain of this project, the stream will not incise again. The reduction in channel slope and the larger bed material coupled with the livestock exclusion fencing (WE H) will prevent a recurrence of bed degradation. Additionally, the channel width/depth ratio will be configured so more frequent out-of-bank flooding will occur, which will improve wetland habitats, distribute flows across a greater wetted width, and decrease flow velocities.

This approach (utilized twice previously in the Tepee Creek watershed) is anticipated to provide direct benefits to the meadow by increasing the elevation of the water table, improving seasonal storage and potentially extending the duration of surface flow in Tepee Creek. Past meadow projects have resulted in a change in groundwater storage, demonstrated through an increase in groundwater elevations (2-3 ft) and less seasonal variation (Fig 1.) Native vegetation has responded positively to the reestablished lateral and longitudinal connectivity between the stream, floodplain, and hyporheic zone (Fig 2). PIT tagging results from the White Creek PIT Study indicate that restored reaches in Tepee Creek have increased fish densities and outmigration rates equal to or greater than non-treated reaches (Klickitat M&E Annual Reports), Cattle exclusion fences were constructed around each meadow at the conclusion of the construction phase. Cattle are excluded from the meadows on a seasonal basis. Stewardship (invasive plant removal and fence maintenance) is conducted annually by KWEP personnel.

The original phase of Tepee Creek meadow work (Tepee IXL) was permitted in 2007 under the original HIP BO for Habitat Improvement, with review by Shannon Stewart (BPA) and Brian Nordlund (NOAA). The second Tepee phase was implemented via funds from the WA SRFB. BPA funded construction oversight, which was listed and reviewed under PNF 2013/9724, channeled through Jenny Lord (BPA).

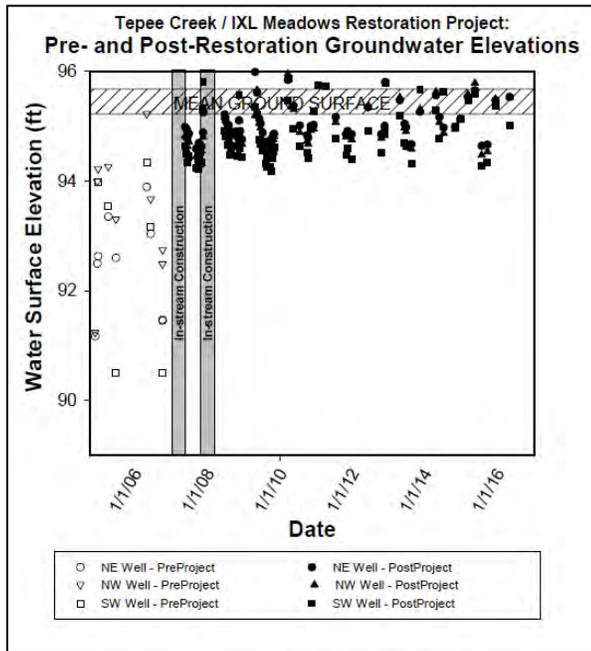


Figure 1. Tepee IXL - Pre- and Post-Restoration Groundwater Elevations.



Figure 2. Tepee IXL before (left) and after (right).



Figure 3. Tepee Phase 2 before (left) and after (right) implementation.

WE G. Revegetate Tepee Creek Phase 3 Site

Lat. 46.201331 Long. -121.004816

Plant vegetation at Tepee Creek Phase 3 site. Native upland and wetland seed mix will be broadcast spread and covered with weed-free straw mulch. Containerized species will be a mix of willow, alder, spirea, and cottonwood. Planting stock will be locally sourced.

WE H. Install Livestock Exclusion Fence - Tepee Creek Phase 3 Site

Lat. 46.201331 Long. -121.004816

Construct livestock exclusion fencing (buck and pole) around the Tepee Creek Phase 3 Meadows Restoration Project. The project reach is approximately 1,000 feet in length, flowing through a grassy perennial meadow at the upstream end and a Ponderosa pine-dominated forest at the downstream end where the valley narrows. The fence perimeter is approximately 4,500 linear feet encompassing 8.8 acres.

WE L. Invasive Plant Control

Conduct weed control associated with sixteen project sites. This will primarily involve manual hand-pull treatments. Treatment at the Haul Road will utilize both manual and chemical methods. The primary target species are knapweed and non-native thistles. Invasive weed control will be conducted on 69.25 acres associated with 16 projects. In 2018 KWEP staff will seek internal approval for the application of herbicides on lands within the Closed Area of the Reservation.

Variance Request

N/A

NMFS Species/Critical Habitat Present in Action Area:

Anadromous Fish:

- | | |
|---|--|
| <input type="checkbox"/> Lower Columbia River Chinook | <input type="checkbox"/> Upper Willamette River Chinook |
| <input type="checkbox"/> Lower Columbia River coho | <input type="checkbox"/> Upper Willamette River steelhead |
| <input type="checkbox"/> Lower Columbia River steelhead | <input type="checkbox"/> Snake River spring/summer-run Chinook |
| <input checked="" type="checkbox"/> Middle Columbia River steelhead | <input type="checkbox"/> Snake River fall-run Chinook |
| <input type="checkbox"/> Upper Columbia River spring-run Chinook | <input type="checkbox"/> Snake River Basin steelhead |
| <input type="checkbox"/> Upper Columbia River steelhead | <input type="checkbox"/> Snake River sockeye |
| <input type="checkbox"/> Columbia River chum | <input type="checkbox"/> Pacific eulachon |
| <input type="checkbox"/> Green sturgeon | |

Essential Fish Habitat Species:

- | | |
|---|--|
| <input type="checkbox"/> Salmon (West Coast Salmon FMP) | <input type="checkbox"/> Estuarine Composite (Ground fish, pelagics) |
|---|--|

USFWS Species/Critical Habitat Present in Action Area:

Freshwater Fish Species:

- Bull Trout

Mammalian Species:

- Canada lynx*
- Columbia white-tailed deer*
- Gray wolf*
- Grizzly bear*
- North American wolverine
- Pygmy rabbit*
- Northern Idaho ground squirrel*
- Woodland caribou*

Avian Species:

- Marbled murrelet
- Northern spotted owl
- Streaked horned lark*
- Western snowy plover

Invertebrate Species:

- Banbury Springs limpet
- Bliss Rapids snail*
- Bruneau Hot Spring snail*
- Fender's blue butterfly
- Taylor's checkerspot butterfly
- Snake River physa snail*
- Oregon silverspot butterfly

Plant Species:

- Bradshaw's lomatium
- Cook's lomatium
- Gentner's fritillary
- Golden paintbrush
- Howell's spectacular thelypody
- Kincaid's lupine
- Large-flowered wooly meadowfoam
- Malheur wire-lettuce
- McFarlane's four o'clock
- Nelson's checkermallow
- Rough popcorn flower
- Showy stickseed
- Slickspot peppergrass
- Spalding's catchfly
- Umtanum Desert buckwheat
- Ute ladies' tresses
- Water howellia
- Wenatchee Mountain checkermallow
- Western lily
- White Bluffs bladderpod
- Willamette daisy

Types of Action:

Identify the types of action(s) proposed.

1. Fish Passage Restoration (Profile Discontinuities)

- a. Dams, Water Control or Legacy Structure Removal
- b. Consolidate, or Replace Existing Irrigation Diversions
- c. Headcut and Grade Stabilization
- d. Low Flow Consolidation
- e. Providing Fish Passage at an Existing Facility

Fish Passage Restoration (Transportation Infrastructure)

- f. Bridge and Culvert Removal or Replacement
- g. Bridge and Culvert Maintenance
- h. Installation of Fords

2. River, Stream, Floodplain, and Wetland Restoration

- a. Improve Secondary Channel and Wetland Habitats
- b. Set-back or Removal of Existing, Berms, Dikes, and Levees
- c. Protect Streambanks Using Bioengineering Methods
- d. Install Habitat-Forming Natural Material Instream Structures (Large Wood, Boulders, and Spawning Gravel)
- e. Riparian Vegetation Planting
- f. Channel Reconstruction*

3. Invasive and Non-Native Plant Control

- a. Manage Vegetation using Physical Controls
- b. Manage Vegetation using Herbicides

4. Piling Removal.

- Piling Removal

5. Road and Trail Erosion Control, Maintenance, and Decommissioning

- a. Maintain Roads
- b. Decommission Roads

6. In-channel Nutrient Enhancement

- In-channel Nutrient Enhancement

7. Irrigation and Water Delivery/Management Actions

- a. Convert Delivery System to Drip or Sprinkler Irrigation
- b. Convert Water Conveyance from Open Ditch to Pipeline or Line Leaking Ditches or Canals
- c. Convert from Instream Diversions to Groundwater Wells for Primary Water Sources
- d. Install or Replace Return Flow Cooling Systems
- e. Install Irrigation Water Siphon Beneath Waterway
- f. Livestock Watering Facilities
- g. Install New or Upgrade/Maintain Existing Fish Screens

8. Fisheries, Hydrologic, and Geomorphologic Surveys

- Fisheries, Hydrologic, and Geomorphologic Surveys

9. Special Actions (Terrestrial Species)

- a. Install/develop Wildlife Structures
- b. Fencing Construction for Livestock Control
- c. Implement Erosion Control Practices
- d. Plant Vegetation
- e. Tree Removal for LW Projects

NMFS Hydro Division Review

Does the project require approval from NMFS Hydro Division for:

Fish Passage Restoration (Profile Discontinuities)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Approval Date: DATE
Install New or Upgrade/Maintain Existing Fish Screens	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Approval Date: DATE
Channel Reconstruction	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Approval Date: DATE

USFWS Terrestrial Species Review

Does the project require confirmation of NLAA Effects determination for:

Mammalian Species	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Approval Date: DATE
Invertebrate Species	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Approval Date: DATE
Avian Species	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Approval Date: DATE
Plant Species	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Approval Date: DATE

RRT REVIEW (for medium or high risk projects only)

Medium Risk Project requiring internal RRT review Yes No

High Risk project requiring inter-agency review? Yes No

Date of RRT submittal: 5/17/2018 Date of RRT Approval: 6/7/2018 RRT Reviewer: Doug Knapp/Dan Gambetta

BPA Determination of Consistency with all Requirements of the HIP III Consultation

The BPA must certify that the proposed project is consistent with all requirements and applicable terms and conditions of the HIP III Consultation.

BPA EC Contact (constitutes your electronic signature): Claire McClory
 Date of Certification: 6/25/18



June 27, 2018

Jenna Peterson, Senior Archaeologist
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

Re: Klickitat Watershed Enhancement Project-Upper Teepee Creek Restoration
Project
EC-4

Dear Ms. Peterson,

The Tribal Historic Preservation Office is sending this letter in regards to the proposed Upper Teepee Creek Restoration Project. The entirety of the project will be occurring within the closed area of the Yakama Reservation.

Our office has had the opportunity to review the archaeological field inventory completed in December of 2017. No Historic Properties were identified within the Area of Potential Effect. Based on the information provided our offices concurs with the determination of no historic properties affected for the proposed undertaking.

If you have any questions please feel free to contact me directly at 509-985-8501.

Sincerely,

Kate Valdez, THPO
Yakama Nation

CC: David Lindley, Yakama Nation Project Manager
Johnson Meninick, Cultural Resources Manager
Jon Shellenberger, Yakama Nation Archaeologist

BONNEVILLE POWER ADMINISTRATION INADVERTENT DISCOVERY OF CULTURAL RESOURCES PROCEDURE

Under federal law, the BPA has the responsibility to protect cultural resources that are inadvertently discovered on federally owned land or during federally funded projects. This document is intended to be used by individuals working on BPA funded projects who, through the course of their work, might inadvertently discover cultural resources.

INADVERTENT DISCOVERY:

If your work brings you into contact with any of the following cultural resources:

- Native American cultural artifacts (example: flakes, arrowheads, stone tools, bone tools, pottery, etc.)
- Historic era artifacts (example: building foundations, homesteads, shipwrecks, mining camps, etc.)
- Human skeletal remains and bone fragments

You must immediately discontinue all ground-disturbing activity. Do not touch or move the objects and maintain the confidentiality of the site.

Follow the procedures below and await further direction from BPA’s Cultural Resources Staff.

CULTURAL RESOURCES DISCOVERY PROCEDURE:

- Stop any ground disturbing activity immediately. **This may be a crime scene.** When bone fragments or possible Native American artifacts are found, study the objects **WITHOUT disturbing, touching, or moving them.** Removing bone fragments, artifacts, and other items from any archaeological site, without proper authorization, is **against the law.** Violators could be charged in state or federal court resulting in a fine or imprisonment, depending on the level of conduct.
- Contact BPA Cultural Resources (CR) staff immediately. Beginning with office phone numbers, continue calling down the list in order until you speak with someone. If no one on the list is available to take your call and it is during regular business hours, contact Michelle Bennett (503) 230-3900 or Erin Marshall (503) 230-5159. Should no one be available by office phone, please contact CR staff on their cell phones.

Name	Office #	Cell #	Email Address	Mailing Address
Jenna Peterson	(503) 230-3018		jepeterson@bpa.gov	Bonneville Power Administration 905 NE 11 th Avenue Portland, OR 97232-4169
Kurt Perkins	(503) 230-4454	(503) 459-0436	knperkins@bpa.gov	
Sunshine Schmidt	(503) 230-5015	(503) 804-1815	srclark@bpa.gov	

- Contact your Direct Supervisor and the Project Manager.
- Immediately complete the *Cultural Resource Discovery Report form* (attached) and send/e-mail to ALL of the BPA CR staff listed above.
- **Do not draw attention to the area with any obvious flagging or markers.** Maintain confidentiality concerning the discovery of the cultural resource, and do not discuss with anyone other than the contact people listed above as required by the BPA Cultural Resource Discovery Report *Statement of Confidentiality.*
- *Only* after following the checklist, completing the Cultural Resource Discovery Report form and obtaining approval from your supervisor, should work continue on your work task or project.
- If you are a supervisor, you should obtain guidance from BPA’s Cultural Resources staff (listed above). This protects the artifacts and sites, and limits BPA’s liability and your personal liability.

**BONNEVILLE POWER ADMINISTRATION
CULTURAL RESOURCES DISCOVERY REPORT
CONFIDENTIAL**

Name of BPA Archaeologist contacted: _____ *Date:* _____

Name of person filling out this form: _____ *Date:* _____

Phone Number: _____ *Email Address:* _____

Project Name: _____ *Project Description:* _____

Who discovered the materials?

Name: _____ *Phone # (req.):* _____

Direct Supervisor: _____ *Phone # (req.):* _____

Project Manager: _____ *Phone # (req.):* _____

Property Owner of Discovery Site:

Federal Agency: _____

State of: _____ *State Agency:* _____

City: _____

County: _____

Private Landowner: _____ *Phone #:* _____

Address: _____

Street City State Zip

BPA Region: _____ *District:* _____

If on a BPA ROW, Name Transmission Line: _____ *Closest Tower #:* _____

Nearest Major Cross Roads/Intersection: _____

State of: _____ *County of:* _____ *Nearest Town:* _____

Location:

Township: _____ *Range:* _____ *Section:* _____ *¼ Section:* NW NE SW SE

Describe access to site: _____

Describe the event(s) that resulted in the discovery: _____

Describe what, to the best of your knowledge, was discovered: _____

Have you removed potential cultural resources during or after discovery? Yes No

If so, describe the item(s) and indicate how they were removed or disturbed, and where they are now:

Please send completed form to one of BPA's Archeologists at:
Bonneville Power Administration, EC-4 Cultural Resources, 905 NE 11th Ave. Portland, OR 97232
FAX (503) 230-5699

Initials of CR Staff and Date Received: _____



Confederated Tribes and Bands
of the Yakama Nation

Established by the
Treaty of June 9, 1855

YAKAMA NATION
WATER CODE ADMINISTRATION
HYDRAULIC PERMIT
#H-2018-01

Details of Application:

Date of Application:	February 1, 2018
Applicant Name:	Yakama Klickitat Fisheries Project
Contact Person:	David Lindley
Mailing Address	P. O. Box 215 Klickitat, WA 98628
Email Address	dlinley@ykfp.org
Phone:	Work: (509)369-3565 Cell: (509)830-0034

Background:

Application to the Yakama Nation Water Code Administration for a Hydraulic Project permit secures agreement by the applicant, David Lindley (Yakama Klickitat Fisheries Project) that this permit is issued under the jurisdiction of the Yakama Nation.

Note: This **Hydraulic Project Approval** permit pertains only to the provisions of the Yakama Nation Hydraulic Code and Water Code. It is the permittee's responsibility to apply for and obtain any additional permits from other permitting agencies that may be necessary for this project.

Proposed Activity:

This information is taken from the application submitted by David Lindley.

Work is proposed for September-October 2018 (when reach is likely to be dry)

The Tepee Creek Meadows Restoration Phase 3 Project is the continuation of an ongoing effort to improve aquatic habitat conditions for ESA listed *O. mykiss* on a local and watershed scale by focusing on restoring incised, degraded, and disconnected sections of headwater meadow streams throughout the Tepee Creek watershed.

The Tepee Creek watershed lies within the Closed Area of the Yakama Reservation, approximately 22 miles east of Mount Adams. The project is located near the headwaters of Tepee Creek, a tributary of White Creek. White Creek flows into the Klickitat River at river mile 40. The project reach is approximately 1000 ft in length flowing through a grassy, perennial meadow at the upstream end and a Ponderosa pine dominated forest at the downstream end where the valley narrows.

The project goal is to increase floodplain groundwater storage to benefit *O. mykiss* rearing habitat that is prevalent in Tepee Creek downstream of the project site.

Project objectives:

- Upon completion of the project, restore overbank flow within the project reach to a 2-year or less recurrence interval.
- Reduce bank erosion, down trailing, and siltation due to unrestricted cattle grazing by constructing a buck and rail fence that will exclude cattle from the meadow during the grazing season (May-October).
- Increase floodplain groundwater storage throughout the meadow reach in order to extend/augment late season flows in Tepee Creek. Groundwater elevations will be documented via shallow groundwater elevation data collected in network of monitoring wells.

Site observations, hydrologic, and hydraulic analysis has concluded that the current channel conditions, sediment supply, and hydrology lead to degraded conditions within the study reach. In order to improve conditions at the Tepee Creek project site, the channel bed will be raised to the elevation that existed prior to perturbations stemming from road construction, forest practices and cattle grazing and subsequent incision. This approach is anticipated to provide direct benefits to the meadow by increasing the elevation of the water table, improving seasonal storage and potentially extending the duration of surface flow in Tepee Creek. Additionally, the channel is proposed to be configured such that more frequent out-of-bank flooding will occur, which will improve wetland habitats, distribute flows across a greater wetted width and decrease flow velocities. These actions are anticipated to help prevent further down-cutting of the channel and mitigate erosive process conditions, which will ultimately provide downstream benefits to the Lower Tepee Creek and White Creek. A summary of proposed project elements include:

- Raise the existing bed elevation of the Tepee Creek channel
- Provide an armored section of channel to transition the raised channel bed to the lower untreated channel bed condition at downstream reach terminus.
- Raise the existing bed elevation for a portion of the tributary channel bed and raising the culvert

The Tepee Creek longitudinal profile suggests that the scouring has resulted in notable channel degradation, causing the channel to incise up to 3-4 feet in some locations within a historic channel alignment. The proposed design incorporates raising the bed using common borrow material sourced on site or imported from nearby borrow sources. The common borrow will contain largely fines that will act to limit the degree of subsurface flow. The common borrow will be capped by rock mix to prevent erosion of the underlying fines. The downstream-most section of fill is the steepest (1.91%), transitioning to the downstream end of the project. This steep zone is designed to withstand higher channel shear than the other sections. An 18" thick layer of graded (Type 2) crushed rock will be placed over the soil fill and along streambanks for 550 feet of stream. This Type 2 rock will also extend out into the confluence region of the tributary and fill a 4-foot scoured region near the outlet of an existing culvert.

The proposed channel then transitions upstream to a 0.87% slope, following the average slope of the valley bottom. The smaller (Type 1) crushed rock will be placed as a 9" blanket to protect the underlying soil fill for 485 feet of stream. As the upstream portions of the channel tapers into less impaired areas, the channel fill depth decreases. The valley slope also decreases so channel slope of 0.39% allows using only topsoil for the upper 335 feet.

The size of the prescribed imported gravel material was informed by hydraulic modeling. The type 1 and 2 rock (6 and 12 inch minus) is of sufficient size that it will not be mobilized during high flow events. The

intent of the oversized rock is to impose a new geology on the stream so that regardless of future timber, grazing and land management practices that are outside the scope and domain of this project, the stream will not incise again. The reduction in channel slope and the larger bed material coupled with the change in grazing practices will prevent a reoccurrence of bed degradation.

A tributary enters the downstream portion of the Tepee Creek project reach and passes through a 24" culvert where it crosses the Tepee Creek Road. The tributary upstream of the culvert is also showing signs of recent incision, and has begun to down-cut 1-2 feet. Fill material (topsoil) is proposed in this location to raise elevation two feet to restore the stream to its original level. Raising the culvert will help prevent recurring incision by imposing a shallower slope. In order to maintain the necessary road fill overtop of the culvert, the road bed will also need to be lifted, an additional foot will provide adequate cover. The culvert is intended to convey water only and not intended to provide fish passage or attract fish into the ephemeral tributary. In order to prevent fish stranding in the seasonal tributary, that historically did not have a well-defined channel, the outfall of the culvert will be approximately 1.8 ft. The outfall height will prevent the upstream movement of fish into the unnamed tributary.

Hydraulic conditions throughout the Tepee Creek project area were modeled using the U.S. Army Corps of Engineers Hydraulic Engineering Center River Analysis System (HEC-RAS 5.0.3). The HEC-RAS 5.0 series uses a two-dimensional (2D) hydraulic modeling component to perform hydraulic computations. Results of include lateral inundation extents throughout the model mesh region, estimates of water surface elevations sometimes influenced by complex flow paths, shear stress values for the designated discharge hydrograph, as well as velocity, magnitude and direction.

The proposed changes to Tepee Creek were represented in the 2D model by duplicating the existing conditions model and incorporating the new grading into the modeled terrain surface. The same synthetic hydrograph was applied at the boundaries, and resulting hydraulic output was compared to existing conditions. By raising the channel bed, greater connectivity is observed at almost all flow scenarios and small flood benches are wetted annually. Increased inundation, decreased and more varied velocities, and greater flow dispersion are observed in the modeled proposed future conditions.

Impacts:

The potential impacts to soils and water will be minimal some existing vegetation will be disturbed at installation locations and staging areas. This disturbance will be kept to a minimum and mitigated if necessary by applying standard near-term erosion control practices (e.g. straw mulching) as well as revegetation (from local cuttings and reseeding with native species). Impacts to water will be Raising the elevation of the stream bed will increase the frequency of overbank flow and reduce erosive forces within the stream channel proper. It will also increase the opportunity for floodplain storage (increasing summer flow duration) and reduce flood peaks. Construction activities will likely introduce some fine sediment that will be quickly dispersed and not expected to have significant or persistent effects. Some in-channel fine sediment will likely be mobilized during installation. Conservation measures will minimize introduced sediment during construction. Fine sediment from both sources will be, temporary, quickly dispersed, and are not expected to have significant effects on turbidity. If flowing water is present, work reaches will be isolated/dewatered using a pump-around approach to reduce fine sediment introduction and transport. The work will be conducted at low flow or no flow. This reach is consistently dry during September and early October. The work is being planned for that time period. The impacts to air quality

include exhaust from equipment during installation (~3 weeks of in-channel work). Impacts to fisheries and wildlife will be some fine sediment will be mobilized in-channel, if there is flowing water. However, the long-term benefits of increased habitat availability will more than offset the short-term fine sediment effects. YNFP personnel will use standard electrofishing procedures to remove fish from reaches to be dewatered in advance of dewatering activities. We anticipate this will not be necessary since work will be timed for when the reach is dry. Dormant hardwoods (willows, dogwood, and cottonwood) collected for the site and grown in the YN Nursery at the Klickitat Field Office will be planted. Noise and dust from construction activities may have short term effects on habitat use by wildlife. However, restoring wet-meadow conditions, removing conifer encroachment, promoting aspen regeneration, and fencing of the meadow will have long-term benefits that far exceed the short-term impacts. The potential impacts to vegetation will be minimal some existing vegetation will be disturbed at installation locations and staging areas. This disturbance will be kept to a minimum and mitigated by applying standard near-term erosion control practices (e.g. straw mulching) as well as revegetation (from local cuttings and reseeding with native species). Dormant hardwoods (willows and cottonwood) collected for the site and grown in the YN Nursery at the Klickitat Field Office will be planted into the constructed areas to create longer-term stability as well as provide shade/cover for the stream as necessary. There is no Cultural Preservation or other foreseeable impacts that have been identified.

Mitigation:

Standard Erosion Control and construction mitigation measures are included in the design plan set and will be included in the bid and subcontract documents between the YN and the contractor performing the work.

Water and Fisheries: Some fine sediment may be introduced and/or mobilized in-channel. However, the long-term benefits of increased habitat availability will more than offset the short-term fine sediment effects. Standard near-term erosion control practices (e.g. straw mulching) will be applied as necessary as well as revegetation (from local cuttings and reseeding with native species).

Air: none; no roads will be used to access the site.

Cultural: No specific mitigation determined/specified by the archeological/cultural survey

Vegetation: Disturbed areas will be reseeded with native seed mix. Dormant hardwoods (willows and cottonwood) collected for the site and grown in the YN Nursery at the Klickitat Field Office will be planted constructed areas to create longer-term stability as well as provide shade/cover for the stream.

Soils: Standard near-term erosion control practices (e.g. straw mulching) will be applied as well as revegetation (reseeding with native species).

Wildlife: No trees or mature vegetation will be disturbed during this project. A site visit with YN Wildlife will be conducted spring 2018 to confirm there are no anticipated impacts.

Proposed Project Abandonment Procedures:

None listed.

Provisions:

1. **NOTIFICATION REQUIREMENT:** The permittee or his/her agent or contractor shall notify the Water Code Administration of the intent to begin work. Notification shall be received by the WCA at **least** three working days prior to the start of construction activities. The notification shall be submitted on the YNWCA-provided notification form, and shall include the permittee's name, project location, starting date of work, and the permit number for the Hydraulic Project Approval. Submission of the 72-hour notification form may be done one or more of the following methods. :
1) Fax to 509-877-1064; 2) Mail to Water Code Administration, P.O. Box 151, Toppenish, WA 98948; 3) Hand delivery to Water Code Administration during regular business hours, 214 Ivy St., Wapato, WA; or 4) Email to Shyanne Pinkham, shyanne_pinkham@yakama.com.
2. This permit authorizes the construction of Teepee Creek Meadow Restoration phase 3. Location of work is on Trust Land: 4139 and 4047. **Instream work window: When applicable instream work in fish-bearing streams shall be completed during the period August 1-September 30. Extension must be approved in writing by the Director.**
3. Removal or repositioning of bed load material (e.g. gravels) is authorized by this HPA and is limited to what is necessary for implementation of Teepee Creek Meadow Restoration phase 3.
4. When applicable every effort shall be taken during all phases of this project to ensure that sediment/debris is not allowed to enter the stream.
5. The use of explosives is not authorized.
6. No petroleum products, hydraulic fluid, chemicals, or any other toxic or deleterious materials shall enter or leak into the stream or other water source. **Permittee is to have spill kits available on site.**
7. All waste material such as construction debris, silt, excess dirt or overburden resulting from the project shall be deposited above the limits of floodwater in an approved upland disposal site.
8. *If at any time, as a result of this project, fish are observed to be in distress, a fish kill occurs, or water quality problems (including equipment leaks or spills) develop, operation shall cease, and Water Code Administration will be immediately notified at (509)865-5121 Ext. 6122 or 6126. Work shall not resume until further approval is given.*
9. Alteration or disturbance of the bank and bank vegetation shall be limited to that necessary to implement Teepee Creek Meadow Restoration phase 3. Where necessary, alteration or disturbance of riparian zone vegetation shall be limited to the minimum necessary so that vegetation will recover more quickly. Clearing and grubbing is not authorized. Vegetation disturbance should be limited to pruning and driving over brush and groundcover to minimize damage to the root systems and allow more rapid regrowth.
10. This Hydraulic Project Approval (HPA) is for work involving Teepee Creek Meadow and associated waterways only. This HPA does not authorize trespass onto property not owned by the permittee. It is the permittee's responsibility to obtain permission to enter property owned by others.
11. This permit is valid for one year from the date of issue. All additional HPA work plans shall be cleared and approved through the Yakama Nation Water Code Administration prior to commencing any activities.

Failure to comply with the terms, conditions, and scope of this permit may result in the cancellation of this permit and/or civil penalties as listed in the YN Law and Order Code Title 60. This Interim Hydraulic permit is to be available on the job site at all times and its provisions followed by the permittee and operator performing the work.

I have read, understand and will comply with the conditions of this permit. Noncompliance can result in civil fines, requests to cease and desist and denial of permit.

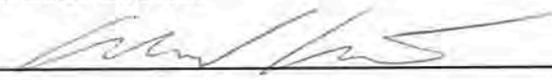
Applicant Initial DL

Rationale for the Decision: H-2018-01

In arriving at this decision, I have reviewed the environmental consequences of the proposed Hydraulic Project. In my judgment, at this time, the Hydraulic Project proposed under this permit represents an environmentally sound activity.

Please read carefully, sign and date this agreement. Your signature indicates that you understand and agree to the conditions set forth in this agreement. Project activities may commence when exact date is given, and sign and date this agreement.

Water Code Director

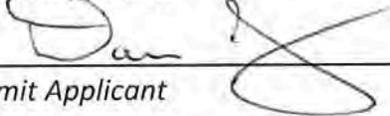
X 

Director

Date 3-20-18

I have read the foregoing permit and agree to comply with all conditions and measures set forth, in exchange for the Yakama Nation's permission to proceed with hydraulic modifications.

Permit Applicant

X 

Permit Applicant

Date 3/28/18

Permit Expiration Date: 3-20-19

APPENDIX G

RELEASE

That _____

of _____, hereinafter called CONTRACTOR, hereby acknowledges receipt of payment by

_____ of _____

_____, hereinafter called OWNER, of the

total sum of _____ (\$ _____) and does hereby accept such sum in full payment, satisfaction and discharge of all amounts due and owing to the CONTRACTOR under that certain contract between the CONTRACTOR and the OWNER dated _____, and any amendments, changes, or additions thereto and for all extra work in connection with said contract, or arising out of or in connection with

In consideration of said payment and other good and valuable consideration, CONTRACTOR hereby releases and forever discharges the OWNER, his officers, agents, servants, and employees of and from any and all claims, demands, actions, causes of action, obligations, and liabilities of every kind and character whatsoever, in law or equity, arising from this Agreement, which CONTRACTOR may have or assert against the OWNER, his officer, agents, servants, and employees.

In further consideration of said payment and other good and valuable consideration, CONTRACTOR hereby undertakes and agrees to indemnify and hold harmless the OWNER, his officers, agents, servants, and employees, of and from any and all claims, demands actions, and causes of actions for damages to property or injury to persons, debts, liens, obligations, and liabilities of every kind and character whatsoever, in law and equity, which any person or persons, corporation, partnership, or association may have or assert against the OWNER, his officers, agents, servants, and employees, arising out of, resulting from, or in connection with the performance of said work by CONTRACTOR, or any act or omission by CONTRACTOR in the performance of the aforesaid Agreement.

CONTRACTOR

LICENSE NUMBER

DATE